

<p style="text-align: center;">IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF DELAWARE</p> <hr/> <p>HARRY SMITH, JR., and ROSLYN) WOODARD SMITH, individually and) as Administrators of the ESTATE) OF HARRY SMITH, III,)) Plaintiffs,)) v.) No. 04-1254-GMS) CITY OF WILMINGTON, JOHN) CIRITELLA, THOMAS DEMPSEY and) MATTHEW KURTEN,)) Defendants.)</p> <hr/> <p style="text-align: center;">Videotape Deposition Upon Oral Examination of JON J. NORDBY, PH.D.</p> <hr/> <p style="text-align: center;">Taken at 3532 Soundview Drive West University Place, Washington</p> <p>DATE: Monday, April 2, 2007 REPORTED BY: Ronald L. Cook CCR, RMR, CRR</p>	<p style="text-align: right;">3</p> <p>1 UNIVERSITY PLACE, WASHINGTON; MONDAY, APRIL 2, 2007 2 1:14 P.M. 3 --o0o-- 4</p> <p>13:14 5 THE VIDEOGRAPHER: This is the videotape 6 deposition of Jon J. Norby, Ph.D., Tape 1, Volume I, in the 7 case of Smith, et al., vs. City of Wilmington, et al., Case 8 No. 04-1254-GMS, in the United States District Court for the 9 Western District of Delaware.</p> <p>13:14 10 Today's date is April 2nd, 2007, and the time 11 is 1:14 p.m. This deposition is taking place at 3532 12 Soundview Drive West, University Place, Washington, and was 13 noticed by John A. Parkins. The videographer is Dan Fisher, 14 for Premiere Realtime Reporting & Videography. The court 15 reporter is Ron Cook, for Premiere Realtime Reporting. 16 Will counsel please announce their 17 appearances for the record, beginning on my right. 18 MS. SULTON: Attorney Anne Sulton appears on 19 behalf of the plaintiffs.</p> <p>13:14 20 MR. PARKINS: I'm John Parkins. I represent 21 the defendants. 22 THE VIDEOGRAPHER: Will the reporter please 23 swear in the witness. 24</p> <p>13:15 25 JON J. NORDBY, PH.D., deponent herein, being</p>
<p style="text-align: center;">2</p> <p>1 A P P E A R A N C E S 2 3 For the Plaintiffs: ANNE T. SULTON Post Office Box 2763 4 Olympia, Washington 98507 609.468.6029 5 annesulton@gmail.com 6</p> <p>For the Defendants: JOHN A. PARKINS, JR. 7 Richards, Layton & Finger One Rodney Square 8 P.O. Box 551 Wilmington, Delaware 19899 9 302.651.7624 parkins@rlf.com</p> <p>10 11 Also Present: DANIEL FISHER, Videographer 12 13 14 15 16 17 18 19 20 21 22 23 24 25</p> <p style="text-align: center; font-size: 2em; opacity: 0.5;">Draft Copy</p>	<p style="text-align: right;">4</p> <p>13:15 1 first duly sworn on oath, 2 was examined and testified 3 as follows: 4</p> <p>13:15 5 E X A M I N A T I O N 6 BY MR. PARKINS: 7 Q. Dr. Nordby, would you please tell us what is 8 forensic science? 9 A. Forensic science is a term that is used to 10 cover natural science as applied to the facts involved in 11 legal matters, so the word forensic literally means forum 12 or -- which means in the Latin I think something like for 13 public debate. So it's the application, it's -- forensic 14 science are applied sciences.</p> <p>13:15 15 Q. Would you consider yourself to be a forensic 16 scientist? 17 A. Yes. 18 Q. Would you tell the jury what you were asked 19 to do in this particular case? 20 A. In this case I was asked to do the following, 21 review all the documentation that was provided to me in 22 terms of police reports, in terms of autopsy report, 23 photographs, anything related to the physical evidence at 24 the -- involving the incident under -- under question. And 25 I was asked to assess the physical evidence in the light of</p>

<p>13:16 1 my areas of expertise and to attempt to -- insofar as the 2 nature of the evidence permits, provide some type of a 3 reconstruction of events, which is really at the heart of 4 what applied forensic sciences do or strive to do.</p> <p>13:16 5 Q. Why don't you tell us what in your background 6 enables you to do such work.</p> <p>7 A. I've always been interested in puzzles and 8 solving puzzles, and my father's a physician, my mother an 9 artist, and I wanted to figure out how my dad could read an 10 x-ray and come up with a course of treatment by looking at 11 these mysterious shadows, and -- and so I found that my 12 interest was in the process of diagnosis or producing 13 medical explanations rather than specifically anything to do 14 with clinically treating patients. So I pursued my interest 15 by studying philosophy of science and logic and philosophy 16 of mathematics, with a twist to applied sciences. So in the 17 course of my education and training I pursued these -- these 18 areas throughout my entire life and continue to do so at 19 this point. And much of the work in forensic science 30 20 years ago, when -- when I was involved in my formal 21 education, comes from training and practical experience as 22 opposed to specific courses of study, which they have today.</p> <p>23 Q. So when you were in college were there 24 frequent colleges with majors in forensic science?</p> <p>13:18 25 A. No.</p>	<p>5</p> <p>13:20 1 Q. Have you worked for any other governmental 2 agencies other than Pierce County?</p> <p>3 A. Yes. Worked for King County, which is 4 Seattle, doing medicolegal death investigations. I was also 5 in both areas heavily involved in writing training materials 6 for investigators, for pathologists. I also taught at the 7 Washington State criminal justice training commission, where 8 I provided training for medical examiners and deputy medical 9 examiners in how to process crime scenes, how to collect, 10 process and store evidence, especially blood-related 11 evidence.</p> <p>12 Q. Have you done any consulting work for 13 governmental agencies?</p> <p>14 A. Yes. I -- I currently am a member of what's 15 called SWGSTAIN, which is the scientific working group in 16 blood stain pattern analysis, and that's with the FBI lab 17 in -- in Washington, D.C. I've been a member of the group 18 and my -- my job is to write protocols for the scientific 19 approach to crime scenes involving blood-stained pattern 20 analysis, and the physics of understanding mechanisms of 21 injury that produce blood at crime scenes.</p> <p>22 Q. Have you ever done any work in connection 23 with September 11th?</p> <p>24 A. Yes. I'm a member of D more the team 1010 --</p> <p>13:22 25 Q. Would you explain what D more the team 10 is?</p>
<p>6</p> <p>13:18 1 Q. Tell us a little bit about your employment 2 experience insofar as it relates to forensic science.</p> <p>3 A. I accepted a position at Pacific Lutheran 4 University as a professor -- new professor at the rank of 5 assistant processor in 1977, knowing that Pierce County, 6 which is the county where we -- we live and where the 7 university is situated, is changing from a -- an old-time 8 coroner system, which is an elected official involved in 9 death investigation, to a medical examiner system, which is 10 a system which requires board certified forensic 11 pathologists, and I thought it would be interesting to be 12 involved in -- in the development of an -- an office.</p> <p>13 My teaching duties included making 14 connections between law enforcement and the academic world.</p> <p>13:19 15 I set up courses in critical thinking and writing, which is 16 one of the areas that I covered in my study of the 17 production and defense of scientific explanations.</p> <p>18 Q. Did you play any role in investigation of 19 deaths in Pierce County?</p> <p>13:19 20 A. Yes. As Part my training I did what's called 21 a preceptorship in forensic medicine with Dr. Emanuel 22 Lacsina, who was then chief medical examiner in Pierce 23 County, and I -- I pursued this course of study for six 24 years, and essentially while pursuing that I was involved in 13:20 25 investigations of deaths in Pierce County.</p>	<p>8</p> <p>13:22 1 A. D more the is -- at the time when it was 2 started was part of a national disaster medical service, and 3 it since became under the guise of Homeland Security. I am 4 a founding member of the department of Homeland Security, 5 which is an honor that was given to those of us who worked 6 at the 911 twin towers. My job was autopsy examination of 7 human remains, and specifically to find medical appliances, 8 remove them and look for serial numbers, for example, in any 9 medical device that might be among the remains. Also to 10 catalog and organize the remains so that we might apply 11 various techniques to help identify the victims.</p> <p>12 I also removed various specimens for forensic 13 odontologists, who are dentists who were charged with 14 comparing postmortem dental records with any anti more item 15 records that were available, in the hope of identifying 16 victims.</p> <p>17 Q. By antemortem, you mean before the victims 18 died?</p> <p>19 A. Before the death occurred, yes.</p> <p>13:23 20 Q. Have you had occasion to deliver any lectures 21 on forensic science issues?</p> <p>22 A. Yes, for many years, since the focus of my 23 intellectual work was medical diagnosis and the problems 24 associated with inference, which is a branch of logic, I 13:24 25 brought that to my training and my experience with forensic</p>

<p style="text-align: right;">9</p> <p>13:24 1 science and forensic medicine, both formally and informally</p> <p>2 in terms of my work experience. But I -- I was able to</p> <p>3 teach courses which I was to develop for Pacific Lutheran</p> <p>4 University, I -- I set up courses in which I lectured,</p> <p>13:24 5 obviously. I also gave many presentations in areas of my</p> <p>6 research and areas of my work to various forensic science</p> <p>7 on, which are peer reviewed, and I've published papers,</p> <p>8 chapters of books, two of my own books, one edited with a</p> <p>9 colleague, which is a textbook in forensic science and</p> <p>13:25 10 medicine, and my own book on the process of the logical and</p> <p>11 philosophical foundations of forensic science involving the</p> <p>12 production and defense of explanations. That's called dead</p> <p>13 reckoning, the art of forensic detection.</p> <p>14 Q. When were your books published?</p> <p>13:25 15 A. My first book was published in 1999. My</p> <p>16 second -- first edition of my second was in 2002, I believe,</p> <p>17 or -- I -- I'm not sure.</p> <p>18 Q. Is there any board which certifies forensic</p> <p>19 scientists?</p> <p>13:25 20 A. The -- the answer is somewhat complex,</p> <p>21 meaning that there are several parts to it. Some areas have</p> <p>22 developed board certification processes in an attempt to</p> <p>23 standardize practice and protocols in the forensic sciences,</p> <p>24 to avoid the sort of hit and miss kind of lapses in training</p> <p>13:26 25 and preparation that one can find in medical examiner --</p>	<p style="text-align: right;">11</p> <p>13:28 1 forensic sciences?</p> <p>2 A. Yes, that's correct.</p> <p>3 Q. And you're a board member?</p> <p>4 A. I was a board member, yes.</p> <p>13:28 5 Q. Tell me what is involved when you were</p> <p>6 certified by the American Board of Medicolegal Death</p> <p>7 Investigators.</p> <p>8 A. We have both a practical requirement and a --</p> <p>9 an academic requirement. The practical requirement involves</p> <p>13:28 10 a certain number of hours of supervision doing medicolegal</p> <p>11 death investigation, which involves examining decedents at</p> <p>12 scenes of sudden or violent death or unexpected death,</p> <p>13 unattended deaths, hospital deaths in some cases, so there's</p> <p>14 a wide range of -- of different cases that fall under the</p> <p>13:29 15 jurisdiction of the medical examiner. So the duties are --</p> <p>16 are varied. So we wanted a practical component to require a</p> <p>17 certain number of hours and certain number of quality of</p> <p>18 level of participation in death investigation.</p> <p>19 Then, since this is also involves an academic</p> <p>13:29 20 area a specialization that requires some medical knowledge</p> <p>21 as well as practical training, there is a written</p> <p>22 examination as well as a practical examination that -- that</p> <p>23 one has to complete.</p> <p>24 In addition, to remain current and maintain</p> <p>13:29 25 board certification, there are continuing medical education</p>
<p style="text-align: right;">10</p> <p>13:26 1 examiners' offices, coroners' offices, or in sheriff's</p> <p>2 departments, police departments and so forth. The most</p> <p>3 obvious is in forensic medicine, forensic pathology, is a</p> <p>4 specialization which has a board certification much like any</p> <p>13:26 5 other specialty, such as internal medicine or radiology or</p> <p>6 psychiatry or other -- other branches, but that wasn't</p> <p>7 established until 1959 in the United States, so -- other</p> <p>8 forensic sciences have followed. There are various</p> <p>9 accrediting agencies, some of which require certain number</p> <p>13:27 10 of hours of experience and some which focus on training and</p> <p>11 so on.</p> <p>12 Q. Are you board certified?</p> <p>13 A. Yes.</p> <p>14 Q. By whom are you board certified?</p> <p>13:27 15 A. The American Board of Medicolegal Death</p> <p>16 Investigators is a -- an organization that was started with</p> <p>17 an effort to help provide some standards for death</p> <p>18 investigation in the United States. There were prior to</p> <p>19 this organization no certifications, no training</p> <p>13:27 20 requirements and so forth to become a medicolegal death</p> <p>21 investigator. And this problem was addressed by members of</p> <p>22 the American academy of forensic sciences. I've been a</p> <p>23 board member in that organization, I've been a member for</p> <p>24 many years, and was on their ethics committee for 10 years.</p> <p>13:28 25 Q. So you're a member of the American academy of</p>	<p style="text-align: right;">12</p> <p>13:29 1 credits which have to be earned, and those are earned by</p> <p>2 attending courses which the American Board of Medicolegal</p> <p>3 Death Investigators approves and gives certain number of</p> <p>4 hours credits for.</p> <p>13:30 5 For example, in my involvement with the FBI</p> <p>6 in SWGSTAIN, we meet twice a year for a week to conduct</p> <p>7 research to do work to advance the forensic science of</p> <p>8 blood-stained pattern analysis, and those hours would be</p> <p>9 applicable for continuing medical education for the board.</p> <p>13:30 10 So those are the components necessary.</p> <p>11 Q. Dr. Nordby, as you wrote a written report for</p> <p>12 me at my request, did you not?</p> <p>13 A. Yes.</p> <p>14 Q. And did you attach to your written report a</p> <p>13:31 15 curriculum vitae?</p> <p>16 A. Yes, I did.</p> <p>17 Q. I'm going to ask you -- I'm going to show you</p> <p>18 what I believe to be your curriculum vitae and ask you if</p> <p>19 this is what you prepared for me.</p> <p>13:31 20 A. Yes.</p> <p>21 Q. Does this reasonably and fairly summarize</p> <p>22 your professional accomplishments in the field?</p> <p>23 A. Yes.</p> <p>24 Q. I'd like to have the court reporter mark this</p> <p>13:31 25 as Exhibit 1, Nordby Exhibit 1, please.</p>

<p style="text-align: right;">13</p> <p>13:31 1 (Deposition Exhibit 1 was marked 2 for identification.) 3 Q. BY MR. PARKINS: Dr. Nordby, have you ever 4 been qualified by a court as an expert witness in the fields 13:32 5 of forensic science? 6 A. Yes. 7 Q. Tell me how often that has occurred. 8 A. I'd have to look at my record. I don't -- 9 it's been enough times that I can't remember. 13:32 10 Q. If I were to hand you a document which you 11 attached to your report, is this the record that you had to 12 look at? 13 A. Yes, and I always try to put a date at the 14 top of both my vita and my court experience, indicating that 13:32 15 it's current through that date, because an additional case 16 may come and need to be added. But yes. 17 Q. Without bothering to count the number of 18 times, can you estimate for us the number of times that you 19 have been qualified by a court to give expert testimony? 13:33 20 A. 25 or 26 times. 21 Q. And these are various courts around the 22 country? 23 A. Yes, sir. They are various jurisdictions in 24 the United States and in Canada. They're both federal court 13:33 25 and state court.</p>	<p style="text-align: right;">15</p> <p>13:35 1 an advocate for any particular side. The results of my 2 scientific endeavors would be the same whether I was working 3 for the plaintiff or the defendant. There would be no 4 difference. And I indicate that in this letter of 13:36 5 engagement, which I ask my prospective clients to sign 6 before I begin any work in -- on the data. 7 Q. Have you ever worked for me or my law firm 8 before? 9 A. No, sir. 13:36 10 Q. Have you ever worked for the Wilmington 11 Police Department before? 12 A. No, sir. 13 Q. You're -- this deposition is being taken in 14 your offices and laboratory in Washington state; is that 13:36 15 correct? 16 A. That's correct. 17 Q. Is it fair to say that last fall you were 18 diagnosed with a serious illness? 19 A. Yes. 13:36 20 Q. Does that -- your illness allow you to travel 21 across the country to testify live before the jury in this 22 matter? 23 A. No. 24 Q. Do you understand that your deposition today 13:37 25 is being conducted in lieu of your live testimony before the</p>
<p style="text-align: right;">14</p> <p>13:33 1 Q. Dr. Nordby, let's take a quick look at your 2 role as an expert in this particular case. Are you being 3 compensated for your time by the defendants? 4 A. Yes. 13:34 5 Q. Would you please tell the jury how much you 6 are charging the defendants for your time. 7 A. My time is billed at \$275 an hour. For long 8 days, many involving more than 12 hours, I bill a flat rate 9 of \$3,000 a day. For courtroom testimony I bill at the rate 13:34 10 of \$500 per hour. Much of that is to account for the 11 overhead of our laboratory, which is quite an expensive 12 operation to run. 13 Q. Is your compensation in this case in any way 14 dependent upon the outcome of the case? 13:34 15 A. No, not at all. In fact, the -- the way that 16 I conduct my consulting practice is that I provide a letter 17 of engagement, which states basically that as a forensic 18 scientist my job is to develop physical evidence, to assess 19 that evidence within the limitations of my own experience 13:35 20 and expertise in the relevant science, and to provide an 21 explanation of why if we are unable to do any inferences -- 22 to support any inferences from the data, why -- why that's 23 the case. I am bound to the best methods of forensic 24 science and medicine that I can maintain to come up with 13:35 25 what the facts show. In that sense, my role is not one of</p>	<p style="text-align: right;">16</p> <p>13:37 1 jury? 2 A. Yes. 3 Q. Let's focus again, if we could, on your 4 assignment. What did you do to analyze the evidence in this 13:37 5 case? 6 A. Well, the first step is to assemble the 7 available evidence and to understand the scope and nature of 8 the questions that might be posed to that evidence, so 9 police reports, anything that involves the collection 13:37 10 process and documentation of physical evidence would be 11 something I need to see, as well as that physical evidence 12 itself. 13 Q. Did you ask me for any documents or 14 information that I refused to give you? 13:37 15 A. No. 16 Q. Did you visit the scene of this incident? 17 A. Yes, I did. 18 Q. Did you examine the automobile which 19 Mr. Smith was driving at the time of this incident? 13:38 20 A. Yes, I did. 21 Q. How long did you spend examining the 22 automobile with -- that Mr. Smith was driving? 23 A. Approximately a week. We analyzed the damage 24 to the vehicle, trying to document anything that involved 13:38 25 the shooting, we tried to examine everything relating to the</p>

<p style="text-align: right;">17</p> <p>13:38 1 blood shed and the incident that occurred, fractures of 2 glass and the nature of the damage to the vehicle. 3 Q. Did you test fire any weapons that were 4 involved that evening? 13:38 5 A. Yes. 6 Q. Did you examine any materials for gunshot 7 residue? 8 A. Yes. 9 Q. I'm going to show you a few photographs that 13:39 10 you have previously submitted to us and we have shared with 11 the -- with Ms. Sulton, and before we do that, I'm going to 12 ask the court reporter to mark them one by one, and I'm 13 going to ask you in connection with each photograph to just 14 tell the jury briefly what is happening in these photos. 13:39 15 Let's ask the court reporter to please mark 16 as the first exhibit, I guess it would be No. 2. 17 (Deposition Exhibit 2 was marked 18 for identification.) 19 Q. BY MR. PARKINS: Incidentally, Dr. Nordby, 13:40 20 did you take these photographs? 21 A. Yes, I did. 22 Q. Can you estimate for us how many photographs 23 you took as part of your investigation? 24 A. It would be very difficult to estimate, but 13:40 25 hundreds.</p>	<p style="text-align: right;">19</p> <p>13:42 1 Q. Incidentally, so that we can make this 2 absolutely clear, the vehicle in this photograph is the 3 vehicle which Mr. Smith was driving at the time of this 4 incident? 13:42 5 A. That's my understanding, that's correct. 6 It's Patrol Car 1180. 7 Q. Would you do me a favor, please, and turn to 8 Page I believe it's 38, which I believe is clipped. 9 A. 37? 13:42 10 Q. 38. 11 A. Okay. 12 Q. Would you hand that to the court reporter, 13 and I'll ask him to mark this as Exhibit 3. 14 (Deposition Exhibit 3 was marked 15 for identification.) 13:42 16 THE WITNESS: Okay. 17 Q. BY MR. PARKINS: Tell the jury what this 18 photograph depicts. 19 A. The top photograph shows how we determine 13:43 20 the -- what's called the -- the Z axis, the point in space 21 in the air vertically where a particular bullet entry or 22 exit, depending, has occurred, and we use lasers to 23 accomplish this, and this process involves setting up the 24 equipment, determining angles and measuring those angles 13:44 25 using lasers. Since the development of the Ruby laser it's</p>
<p style="text-align: right;">18</p> <p>13:40 1 Q. Okay. 2 A. Including photomicrographs. 3 Q. What are photomicrographs? 4 A. Photomicrographs are images that are taken 13:40 5 through a microscope. Sometimes they are incorrectly 6 referred to as microphotographs, which would be very, very 7 small pictures. These indeed are images that are taken 8 through a microscope. 9 Q. Would you take a look at the first one, which 13:40 10 is on I believe Page 1, that the court reporter has been 11 kind enough to mark. 12 A. Yes. 13 Q. Would you please tell the jury what is 14 happening in the upper photograph in -- in this collection. 13:41 15 A. Yes. This is documenting the process that I 16 used to provide information about bullet entrances and exits 17 in the vehicle. This top photograph shows the plum bob and 18 a laser level and angle determining dial, which we use to 19 document three dimensions of the impact of a bullet with the 13:41 20 vehicle. We essentially treat the vehicle as if it were on 21 an XYZ axis, which is a way of giving numbers running across 22 the front of the vehicle, numbers running the length of the 23 vehicle, and then numbers running the height of the vehicle. 24 And the photographs here depict that process of setting up 13:42 25 the measuring devices to accomplish this examination.</p>	<p style="text-align: right;">20</p> <p>13:44 1 become much easier to accomplish these measurements at -- at 2 various crime scenes, and it becomes much easier to 3 understand the dynamics of a shooting when you can 4 understand where the exits and entries occur. 13:44 5 The hope is to provide a map of the shooting 6 sequence, not with the ability, necessarily, to tell which 7 shot came first and second but to help understand the 8 patterns that the shots in this case must conform to and the 9 physical description of their trajectories. 13:44 10 Q. Why not use plastic dowels or metal dowels to 11 do the same thing? 12 A. There are several different methods that are 13 suitable. The difficulty with metal dowels, and again, the 14 difficulty with any measurement technique, is that it 13:45 15 requires an understanding of the materials involved in the 16 shooting. In this case a car as very complex collection of 17 glass, different types of glass, safety glass and tempered 18 glass, then metals of different types, plastics, rubber, 19 cloth, and each of those materials will respond slightly 13:45 20 differently to the passage of a bullet, and it also depends 21 on the type of ammunition. So what we're -- what we're 22 trying to do is to appreciate the fact that bullets, while 23 for the most part they travel in straight lines, when they 24 hit a target they -- there is a deflection or some sort of 13:46 25 change in the direction of that projectile.</p>

<p style="text-align: right;">21</p> <p>13:46 1 Metal rods traditionally have been used and 2 put together to accomplish this approximation of a 3 trajectory, but sometimes it becomes potentially misleading. 4 If we think that because it's -- demonstrates a straight 13:46 5 line with a -- with a trajectory rod, that that was the path 6 of the bullet. The laser allows us a higher degree of 7 control over the angle and the measurement so that we can 8 appreciate deflections more easily. Also, there isn't the 9 need to touch or damage potentially change the entrance or 13:46 10 exits of the projectiles when we use a laser, since light 11 simply passes through. 12 Q. How could you see, by the way, the path of 13 the laser beam? 14 A. What we do is we examine the vehicle, in this 13:47 15 case in a confined controlled environment, where we 16 introduce fog or smoke. It's a particular benign sort of 17 particulate that is suspended in the air, and the laser 18 simply shows on those suspended particles. 19 Q. So you put the vehicle in a closed garage and 13:47 20 fill it with smoke or fog and then take the photographs? 21 A. Yes. 22 Q. Would you take a look, please, at Page 41. 23 And I'm going to ask that ask you to hand 24 that to Ron and have him mark it as -- Exhibit 4, is it? 13:48 25 THE REPORTER: Yes.</p>	<p style="text-align: right;">23</p> <p>14:01 1 May I see the book for a second, please? 2 A. Yes. 3 MR. PARKINS: I'm going to ask the reporter 4 to please mark as Exhibit 5 Page 48. 14:02 5 (Deposition Exhibit 5 was marked 6 for identification.) 7 Q. BY MR. PARKINS: Does Exhibit 5 depict a 8 similar effort as you just described to us in connection 9 with 41? 14:02 10 A. Yes. 11 Q. Okay. Can we take -- let's see this book for 12 a second. 13 Can I ask the court reporter to mark as 14 Exhibit No. 6 Page 91. 14:03 15 (Deposition Exhibit 6 was marked 16 for identification.) 17 Q. BY MR. PARKINS: What does Page -- Exhibit 18 No. 6 show? 19 A. This is -- represents the documentation and 14:03 20 measurements that were -- were done for the shots that came 21 through the rear window of Patrol Car 1180 and also instruct 22 Plexiglas slider between the rear passenger compartment and 23 the front of the -- front seat of the vehicle. The numbers 24 and letters are used to help us orient and -- and document 14:04 25 each of the particular bits of damage. A commonly, although</p>
<p style="text-align: right;">22</p> <p>13:48 1 (Deposition Exhibit 4 was marked 2 for identification.) 3 THE WITNESS: I need to get some water. 4 MR. PARKINS: Let's take a short break, 13:48 5 please. 6 THE VIDEOGRAPHER: We're going off the 7 record. The time is 1:48 p.m. Please stand by. 8 (Short recess.) 9 THE VIDEOGRAPHER: We're back on the record. 14:00 10 The time is 2:00 p.m. 11 Q. BY MR. PARKINS: What does 41 depict? 12 A. The -- the top photograph shows the 13 orientation of a bullet crease and it is size and place in 14 three-dimensional space. We also use at least three 14:00 15 different applications of method where possible to produce a 16 measurement. Because there are factors that can influence 17 one method over another, such as error rates or other issues 18 of more technical scientific sort, I will use trajectory rod 19 and a laser and simple mathematics to determine what we can 14:01 20 from a particular bullet impact in this case, and that's 21 what that depicts. It shows the plum bob orienting vertical 22 space and it shows the angle of impact with the trajectory 23 rod, and then a suitable measuring device, which gives us a 24 scale for the whole process. 14:01 25 Q. Thank you.</p>	<p style="text-align: right;">24</p> <p>14:04 1 not always, is an entrance, B is an exit, although not 2 always, it's not a hard-and-fast rule, but as long as we 3 understand that part of the effort is to understand 4 entrances and exits, fracture patterns as they apply or 14:04 5 don't apply, and what -- whatever else the physical evidence 6 here can show us about each of those sets of impacts. 7 Q. Based upon the information that you gleaned 8 from this undertaking, did you attempt to approximate the 9 trajectories of the bullets that were fired at the police 10 car? 11 A. Yes. Yes. And again, the -- the notion of 12 importance here is reliability to make determinations of 13 entrances and exits, not always precision or exacting 14 measurements, because the different materials according to 14:05 15 the research that I have done by firing suitable ammunition 16 through different types of materials have what are called 17 deflection angles, and those deflection angles can vary 18 with -- with the material, with the type of ammunition 19 that's used, and sometimes even with the environment, that 14:05 20 is, whether the surface is wet or not wet, and so on. So 21 the -- the effort is to -- to document each of those bits of 22 data and record the result. 23 Q. Is it possible to determine which shot was 24 fired first? 14:06 25 A. No.</p>

25

14:06 1 **Q. Based upon your examination, do you have any**
2 **conclusions as to whether your findings are consistent or**
3 **inconsistent with the positions of the defendant police**
4 **officers as they've described them in their depositions?**

14:06 5 A. Without recalling every detail, it certainly
6 is consistent with the story that was provided to me in
7 those depositions.

8 **Q. Did you see any evidence that the car was**
9 **struck by anyone standing on the side of the car, on the**
10 **driver's side?**

14:07 11 A. On the driver's side, no. All of the impacts
12 that were documented either came from behind -- from the
13 rear of the vehicle or toward the rear and to the right
14 side, that would be the passenger side of the vehicle, and
15 those opinions are based upon the damage to the vehicle and
16 the type of damage that we see to the vehicle.

17 **Q. May I see the photos for a second, please.**
18 **I'm going to ask the court reporter to mark**
19 **as Exhibits 6 and 7 two photographs that appear in Appendix**
20 **Part 3, Pages 1 and 3.**

14:07 21 THE REPORTER: Counsel, this is 7 and 8.
22 MR. PARKINS: Thank you.
23 (Deposition Exhibit 7 was marked
24 for identification.)

14:09 25 **Q. BY MR. PARKINS: Dr. Nordby, would you take a**

26

14:09 1 **look at Exhibits 7 and 8 and tell us if you took these**
2 **photographs.**

3 A. Yes, I did.

4 **Q. Briefly, what do they depict?**

14:09 5 A. These are comparisons of test-fired bullets
6 from a particular pistol, with a serial number SAF0327, and
7 they're compared with the bullet recovered by the medical
8 examiner from the decedent, Mr. Harry Smith the 3rd, and
9 these photographs were taken with a comparison microscope
10 and documented showing the -- the physical features of each.

11 **Q. In your opinion does the -- the bullet which**
12 **was retrieved from Mr. Smith match the test bullet that --**
13 **that you fired?**

14 A. Yes, both class and individual
15 characteristics show that the bullet recovered from
16 Mr. Harry Smith the 3rd was fired through that particular
17 pistol.

18 **Q. Do you have an understanding who that pistol**
19 **was used by?**

14:10 20 A. Yes. I was told that it was Officer
21 Cirtella's pistol.

22 **Q. Thank you.**
23 **Was this the bullet that was retrieved from**
24 **Mr. Smith's brain?**

14:11 25 A. Yes, I believe so.

27

14:11 1 **Q. Okay.**
2 **Would you take a look at Page 8 and tell us**
3 **briefly what is there.**

4 A. Excuse me. Exhibit 8?

14:11 5 **Q. Exhibit 8. I'm sorry.**
6 A. Yes. This, again, shows two -- two
7 photographs. The top photograph compares a known with an
8 unknown -- a known cartridge case fired through this
9 particular pistol, Officer Cirtella's pistol, and an
10 unknown item from Harrison Street, found at the scene. And
11 again, these are firing pin impressions in the primer of the
12 cartridge, and the firing pin on a pistol will leave
13 characteristic impressions that can be analyzed in terms of
14 their class as well as individual characteristics.

14:12 15 **Q. Do you have an opinion as to whether the same**
16 **weapon fired both of -- used -- excuse me. Do you have an**
17 **opinion as to whether the shell casings were both fired from**
18 **the same weapon?**

19 A. Yes, they were.

14:12 20 **Q. Okay.**
21 **One last photograph to look at, please.**
22 **I'm going to ask the reporter to mark as**
23 **Exhibits 9, I believe, Page 4 from Part 7 of the appendix.**
24 **(Deposition Exhibit 9 was marked**
25 **for identification.)**

28

14:13 1 MR. PARKINS: Is that 9?
2 THE REPORTER: Yes.

3 **Q. BY MR. PARKINS: Without any detailed**
4 **scientific explanation, can you just briefly tell us what**
5 **Exhibit 9 represents?**

6 A. This is a graph, which represents spectra
7 from x-ray fluorescence analysis of particular items. In
8 this case it's the headliner from the driver's side of
9 Patrol Car 1180. And what -- what this does is x-ray
10 fluorescence is a -- a scientific technique that we use to
11 determine the elements that are present in a particular
12 sample, and x-ray fluorescence works particularly well on
13 melts.

14 **Q. Were you looking for any particular elements**
15 **in -- in this study?**

16 A. Yes. When a -- a cartridge is fired in a
17 pistol such as Officer's Cirtella's pistol a primer is
18 struck by the firing pin and that primer initiates the burn
19 for the gunpowder to fire the bullet through the pistol, and
20 characteristically there's antimony, barium and lead in most
21 primers, and one indicator of the proximity of a -- the
22 discharge of a firearm to a particular target is the
23 presence of antimony, barium and lead fused as one particle.

14:14 24 **Q. Did you find any evidence of antimony, barium**
25 **and lead in the headliner of the car?**

<p style="text-align: right;">29</p> <p>14:15 1 A. No.</p> <p>2 Q. Did you similarly analyze the clothing worn</p> <p>3 by Mr. Smith at the time of this event?</p> <p>4 A. Yes, I did.</p> <p>14:15 5 Q. Did you find any antimony, barium or lead on</p> <p>6 his clothing?</p> <p>7 A. No, I did not.</p> <p>8 Q. What does the absence of such a finding tell</p> <p>9 you?</p> <p>14:15 10 A. Well, one has to be careful whenever one</p> <p>11 infers from the absence of something, but certainly in this</p> <p>12 case, considering other factors, as well, that -- the</p> <p>13 conclusion is that we can't say that any of those items,</p> <p>14 whether it be headliner or clothing, was within three feet</p> <p>14:15 15 of the discharge of a -- of a firearm.</p> <p>16 Q. If someone had stuck a firearm into the car</p> <p>17 to shoot Mr. Smith, would you have expected to find those</p> <p>18 elements in the materials you tested?</p> <p>19 A. Yes, I would expect to find them.</p> <p>14:16 20 Q. Let's move on to your conclusions for a few</p> <p>21 minutes. And I'd like to focus your attention first on the</p> <p>22 events on 5th Street. The plaintiffs in this case I believe</p> <p>23 contend that Mr. Smith was trying to drive away from</p> <p>24 Detective Ciritella on 5th Street and the defendants contend</p> <p>14:16 25 that Mr. Smith was driving towards Detective Ciritella on</p>	<p style="text-align: right;">31</p> <p>14:18 1 the same type of ammunition with the same amount of powder,</p> <p>2 the same general configuration and design as those used by</p> <p>3 the Wilmington Police Department at the time of this</p> <p>4 shooting.</p> <p>14:19 5 The measurements were taken showing the --</p> <p>6 the location that ejected cartridge cases would fall when</p> <p>7 discharged from the weapon, and there's a wide variety, as</p> <p>8 one would expect, of distances which were documented and put</p> <p>9 together in a chart.</p> <p>14:19 10 Q. Did you use the same kind of ammunition as</p> <p>11 Detective Ciritella was using that night?</p> <p>12 A. Yes.</p> <p>13 Q. What general conclusions can you reach as to</p> <p>14 the pattern of ejection of the shells -- shell casings?</p> <p>14:19 15 A. That the particular pistol discharges its</p> <p>16 spent cartridge cases slightly backward and to the right,</p> <p>17 which is the design of the weapon. Also, depending on the</p> <p>18 particular location that the shooter holds the weapon, it's</p> <p>19 possible and it happened several times that the ejected</p> <p>14:20 20 cartridge casing hit the shooter, and sometimes went higher,</p> <p>21 sometimes went lower, but the cartridge cases seemed to spin</p> <p>22 and stay in the air for some period of time rather than just</p> <p>23 go straight down.</p> <p>24 Q. What does the fact that there was one of</p> <p>14:20 25 Detective Ciritella's shell casings found in the car tell</p>
<p style="text-align: right;">30</p> <p>14:16 1 the 5th street. What does the physical evidence tell us</p> <p>2 about what happened at that time?</p> <p>3 A. The physical evidence indicates that Patrol</p> <p>4 Car 1180 was going toward the position that Officer</p> <p>14:17 5 Ciritella had taken at the corner and was going toward and</p> <p>6 past him.</p> <p>7 Q. And what physical evidence tells us that?</p> <p>8 A. There are several factors. One is the</p> <p>9 presence of glass on the corner. The glass is from the side</p> <p>14:17 10 window, at least it is typical of side window glass from</p> <p>11 the -- from the properly car. It is tempered glass. Then</p> <p>12 also there are two cartridge cases that were fired through</p> <p>13 over Ciritella's pistol that were found, one in the vehicle</p> <p>14 itself in the front seat of the -- of the properly car, and</p> <p>14:17 15 one found in the windshield wiper well of the vehicle, and</p> <p>16 the other factor are -- involves tire impressions and tire</p> <p>17 marks, and the impact between the properly car and a parked</p> <p>18 vehicle, which was a white Jeep.</p> <p>19 Q. Let's -- let's focus for a moment on the</p> <p>14:18 20 shell casings, one of which was found in the car and one on</p> <p>21 the -- in the windshield wiper well. Did you test Detective</p> <p>22 Ciritella's weapon to see how it ejected shell casings?</p> <p>23 A. Yes. I fired the weapon over a flat concrete</p> <p>24 surface so we could understand the characteristic patterns</p> <p>14:18 25 if there are characteristic patterns that result from firing</p>	<p style="text-align: right;">32</p> <p>14:20 1 you?</p> <p>2 A. Well, that tells me given the testing that</p> <p>3 we -- we did -- that I did with -- with respect to the</p> <p>4 ejection patterns -- that tells me that within a range of</p> <p>14:21 5 distances we -- we -- we can put that cartridge case and</p> <p>6 its -- the fact that it's a spent cartridge case in</p> <p>7 proximity with that squad car, so that in order for that</p> <p>8 cartridge case to be in the front seat along the center</p> <p>9 console area of the squad car, the squad car and the ejected</p> <p>14:21 10 cartridge case had to be very close to each other in -- in</p> <p>11 space and time.</p> <p>12 Q. Would that suggest the direction in which the</p> <p>13 squad car was driving?</p> <p>14 A. It -- it would. It would suggest that the</p> <p>14:21 15 car was moving -- if we're facing at direct -- sideways,</p> <p>16 facing the passenger door, that it was moving from -- from</p> <p>17 left to right, and that since the pistol ejects cartridge</p> <p>18 cases also to the -- to the right and slightly backward and</p> <p>19 upward, that the cartridge case came through the window of</p> <p>14:22 20 the -- of the squad car while it was still in the air,</p> <p>21 meaning that -- that the car was fairly close.</p> <p>22 Q. Does that suggest whether the car was driving</p> <p>23 toward -- behind Mr. Ciritella?</p> <p>24 A. I'm sorry. Could --</p> <p>14:22 25 Q. Was driving left to right; am I correct?</p>

<p style="text-align: right;">33</p> <p>14:22 1 A. Yes.</p> <p>2 Q. Was it also moving in a -- towards his rear?</p> <p>3 A. No, it would be moving away, toward --</p> <p>4 Q. Was the car moving away from Detective</p> <p>14:22 5 Ciritella when he was shooting?</p> <p>6 A. No. It would be coming right up to him.</p> <p>7 Q. Right.</p> <p>8 A. So --</p> <p>9 Q. I'm sorry.</p> <p>14:23 10 A. I'm not sure I understood.</p> <p>11 Q. No.</p> <p>12 You -- you also made reference to glass.</p> <p>13 A. Yes.</p> <p>14 Q. I'm going to show you a photograph which you</p> <p>14:23 15 reproduced in part of your report at Page -- supplemental</p> <p>16 report at Page 4.</p> <p>17 Would we have the court reporter mark that as</p> <p>18 I believe Exhibit 9.</p> <p>19 THE REPORTER: 10, Counsel. 10.</p> <p>14:23 20 MR. PARKINS: 10. Sorry.</p> <p>21 (Deposition Exhibit 10 was marked</p> <p>22 for identification.)</p> <p>23 MR. PARKINS: Anne, for purposes of the</p> <p>24 record, the only portion of Exhibit 10 is the photograph and</p> <p>14:23 25 not the accompanying text, and not the report.</p>	<p style="text-align: right;">35</p> <p>14:25 1 THE REPORTER: Yes.</p> <p>2 (Deposition Exhibit 11 was marked</p> <p>3 for identification.)</p> <p>4 Q. BY MR. PARKINS: The photograph to which I'm</p> <p>14:26 5 referring, Dr. Nordby, is the lower of the two photographs.</p> <p>6 A. Yes.</p> <p>7 Q. What does that depict?</p> <p>8 A. It shows that the white Jeep had a antitheft</p> <p>9 device in place, called the Club, and that had locked the</p> <p>14:26 10 steering wheel in -- in position, and it also appears to</p> <p>11 have had a -- another standard safety lock mechanism, which</p> <p>12 kept the wheels from turning.</p> <p>13 Also, one can see the damage to the -- to the</p> <p>14 white Jeep as well as the tire tracks left by Patrol Car</p> <p>14:27 15 1180.</p> <p>16 Q. Detective Ciritella will testify that as the</p> <p>17 car turned the corner he could hear tires screaming and</p> <p>18 smell rubber burning. Based upon the evidence that you have</p> <p>19 seen, do you believe that to be accurate?</p> <p>14:27 20 A. Yes.</p> <p>21 Q. There has been some suggestion that this was</p> <p>22 a low-speed crash because the air bags on the properly car</p> <p>23 did not deploy. Where are -- what causes an airbag to</p> <p>24 deploy on a car?</p> <p>14:27 25 A. Well, in the design of this police</p>
<p style="text-align: right;">34</p> <p>14:23 1 Q. What does this photograph depict, Dr. Nordby?</p> <p>2 A. It shows a police officer pointing to glass</p> <p>3 from a tempered glass side window on the corner of 5th and</p> <p>4 Harrison.</p> <p>14:24 5 Q. BY MR. PARKINS: Is this the glass to which</p> <p>6 you earlier referred when you were telling us about the</p> <p>7 proximity of the motor vehicle?</p> <p>8 A. Yes.</p> <p>9 Q. Okay. Thank you.</p> <p>14:24 10 Dr. Nordby, I'd like to now focus on what</p> <p>11 happened as the properly car turned the corner. I believe</p> <p>12 it's conceded that it struck a -- a Jeep Cherokee.</p> <p>13 A. Yes.</p> <p>14 Q. Can you tell us anything about whether the</p> <p>14:24 15 car was -- the stolen car was accelerating or decelerating?</p> <p>16 A. Yes. The evidence at the scene indicates</p> <p>17 that the car was accelerating. The -- the vehicle left</p> <p>18 rubber trail tread impressions from this acceleration. The</p> <p>19 2002 Ford vehicle is designed to grip one side if the other</p> <p>14:25 20 side slips, in a type of traction control, and that left</p> <p>21 side wheel, the driver's side wheel, was -- was probably</p> <p>22 spinning and producing a lot of smoke and the other wheel</p> <p>23 was maintaining traction.</p> <p>24 Q. I'm going to show you a photograph on Page 7</p> <p>14:25 25 of your supplemental report. And this will be Exhibit 11?</p>	<p style="text-align: right;">36</p> <p>14:27 1 interceptor the frame rails have the sensors which trigger</p> <p>2 the airbag, and most modern cars are designed to protect the</p> <p>3 passengers and occupants, drivers, as well, from injury</p> <p>4 during any impact. This particular impact damaged the right</p> <p>14:28 5 front fender of Patrol Car 1180 and that damage did not</p> <p>6 directly strike the front bumper with sufficient force to</p> <p>7 deploy the air bags. The failure of the bags to deploy is</p> <p>8 actually a design feature because the vehicle crumpled on</p> <p>9 the right side the way it was designed to do.</p> <p>14:28 10 Q. I'm going to show you a photograph, which</p> <p>11 I'll ask the reporter to mark as Exhibit 12.</p> <p>12 (Deposition Exhibit 12 was marked</p> <p>13 for identification.)</p> <p>14 Q. BY MR. PARKINS: It's the upper photograph to</p> <p>14:29 15 which I would like you to refer. Does this photograph</p> <p>16 depict the damage to the properly car?</p> <p>17 A. Yes. This shows the crumple zone on the</p> <p>18 right front.</p> <p>19 Q. Were the airbag sensors on this 2002 Crown</p> <p>14:29 20 Victoria police interceptor impacted?</p> <p>21 A. No.</p> <p>22 Q. Does the absence of airbag deployment in this</p> <p>23 particular incident tell us anything at all about the speed</p> <p>24 at which the -- the properly car was going when it hit the</p> <p>14:29 25 Jeep?</p>

<p style="text-align: right;">37</p> <p>14:29 1 A. No.</p> <p>2 Q. Were you able to make any determination as to</p> <p>3 what likely happened to Mr. Smith as the properly car hit</p> <p>4 the Jeep Cherokee?</p> <p>14:30 5 A. Yes, my examination of the windshield showed</p> <p>6 in the upper left-hand corner of that windshield that there</p> <p>7 was an impression typical of a blow from a forehead to</p> <p>8 the -- to the glass, and that -- that was documented</p> <p>9 photographically and examined. So in -- in my opinion when</p> <p>14:30 10 the vehicle struck the Jeep Mr. Smith bumped his head on the</p> <p>11 front of the windshield.</p> <p>12 MS. SULTON: I'm going to object and ask that</p> <p>13 that testimony be stricken because Dr. Nordby is not a</p> <p>14 biomechanical expert.</p> <p>14:30 15 MR. PARKINS: Okay.</p> <p>16 Q. Dr. Nordby, did you find any residual</p> <p>17 material on the inside of the windshield at the point where</p> <p>18 that impact took place?</p> <p>19 A. Yes, as I recall, there was some grease and a</p> <p>14:31 20 pattern impression and I -- I can't recall what else we</p> <p>21 found.</p> <p>22 Q. Do you recall whether the autopsy report made</p> <p>23 any in -- suggestion as to whether there had been --</p> <p>24 A. Yes.</p> <p>14:31 25 Q. -- some impact involving Mr. Smith's</p>	<p style="text-align: right;">39</p> <p>14:33 1 made a number of observations. The -- one pallet had</p> <p>2 instruct headrest and the other bullet had to go through</p> <p>3 Plexiglas in order to reach that area of the -- of the car</p> <p>4 occupied by the decedent.</p> <p>14:33 5 Q. The flex glass meaning the barrier between</p> <p>6 the front and back seats?</p> <p>7 A. Yes, that's correct.</p> <p>8 Q. Did the car which -- the bullet which struck</p> <p>9 the headrest also have to hit the Plexiglas first?</p> <p>14:33 10 A. Yes.</p> <p>11 Q. What happens when bullets hit Plexiglas?</p> <p>12 A. There is a -- in this particular case the --</p> <p>13 the jacketed ball round ammunition will expand, and it's</p> <p>14 designed to expand in -- in size. Also, Plexiglas in the</p> <p>14:34 15 experiments that I've done in the past by shooting</p> <p>16 ammunition through Flex I glass indicate that there's a</p> <p>17 slight downward deflection when a projectile strikes that,</p> <p>18 because obviously when that projectile is going at a certain</p> <p>19 rate and it slows markedly when it strikes the object such</p> <p>14:34 20 as Flex glass.</p> <p>21 Q. Do you have an opinion as to whether</p> <p>22 Mr. Smith was sitting upright or slumped forward over the</p> <p>23 steering wheel when he was struck by these two bullets?</p> <p>24 MS. SULTON: I want to again reiterate my</p> <p>14:34 25 standing objection to any testimony being offered by this</p>
<p style="text-align: right;">38</p> <p>14:31 1 forehead?</p> <p>2 A. Yes, the pathologist reported a contusion in</p> <p>3 the area that I believe hit the windshield.</p> <p>4 Q. Thank you.</p> <p>14:31 5 Let's move on. The medical examiner's report</p> <p>6 indicates that two shots struck Mr. Smith from the rear.</p> <p>7 Did you make any determination as to whether any of these</p> <p>8 bullets struck anything before hitting Mr. Smith?</p> <p>9 A. Yes.</p> <p>14:32 10 MS. SULTON: I'm going to object to this</p> <p>11 entire line of questioning about any injuries, the cause</p> <p>12 and/or manner of death of Mr. Smith, because Dr. Nordby is</p> <p>13 not qualified to render an opinion about physical injuries.</p> <p>14 He is not a medical doctor, has no education in the field of</p> <p>14:32 15 medicine, and is not board certified as a pathologist. So I</p> <p>16 will leave that as a continuing objection.</p> <p>17 MR. PARKINS: That's fine.</p> <p>18 MS. SULTON: Thank you, Counsel.</p> <p>19 MR. PARKINS: Would you like the question</p> <p>14:32 20 reread?</p> <p>21 THE WITNESS: Please.</p> <p>22 MR. PARKINS: Ron, would you do that for me,</p> <p>23 please.</p> <p>24 (Record read.)</p> <p>14:33 25 THE WITNESS: Yes. We did a number of --</p>	<p style="text-align: right;">40</p> <p>14:35 1 particular witness because he is not qualified to render</p> <p>2 testimony about the cause or manner of death. Thank you,</p> <p>3 Counsel.</p> <p>4 THE WITNESS: Repeat.</p> <p>14:35 5 MR. PARKINS: Would you read it back, please,</p> <p>6 Ron.</p> <p>7 (Record read.)</p> <p>8 THE WITNESS: The evidence shows that he was</p> <p>9 upright given the trajectories and the wound path described</p> <p>14:35 10 by the pathologist.</p> <p>11 Q. BY MR. PARKINS: And what do you mean by the</p> <p>12 trajectories?</p> <p>13 A. The trajectories meaning the incoming rounds</p> <p>14 through the vehicle, the angles at which all of those</p> <p>14:35 15 potential bullets had to take in order to reach the occupied</p> <p>16 space.</p> <p>17 Q. Thank you.</p> <p>18 Let's focus, if we could, on the shot that</p> <p>19 struck Mr. Smith in the head. Do you have an opinion as to</p> <p>14:36 20 what trajectory that bullet took?</p> <p>21 A. Yes.</p> <p>22 Q. What trajectory did that take?</p> <p>23 A. Well, the bullet came in from the side. One</p> <p>24 has to be cautious in -- in putting together shooting</p> <p>14:36 25 scenarios in this sense because heads obviously move, but</p>

<p style="text-align: right;">41</p> <p>14:36 1 when we put together the information we have from the squad</p> <p>2 car itself and damage to the vehicle, the bloodstain pattern</p> <p>3 evidence which is present inside the vehicle, the medical</p> <p>4 examiner's account of the direction of the bullet impact</p> <p>14:37 5 through the decedent's head, we can come up with a</p> <p>6 trajectory, as you put it, that the bullet came from the</p> <p>7 right side or the passenger side of the car, and that the</p> <p>8 decedent was upright in the -- in the vehicle when this</p> <p>9 bullet struck his head.</p> <p>14:37 10 Q. The plaintiffs have alleged in this case that</p> <p>11 Mr. -- that the defendant officers shot Mr. Smith after the</p> <p>12 police car had come to a stop. Do you have any opinion as</p> <p>13 to whether the car was still moving when the shot which hit</p> <p>14 him in the head was fired?</p> <p>14:38 15 A. The movement of the vehicle is not something</p> <p>16 that is captured by an analysis of an impact of an injury or</p> <p>17 damage to the -- to the vehicle itself. It occurs to me</p> <p>18 that we have to consider the -- the scene, as well, the</p> <p>19 glass, the fractures of different types of glass, the</p> <p>14:38 20 striking the Jeep and the movement of the Jeep, as well, and</p> <p>21 the fact that for that bullet to have struck the decedent in</p> <p>22 the head, that there had to be a relationship between --</p> <p>23 between him and the vehicle. And that's what we can look at</p> <p>24 the bloodstain patterns to tell us.</p> <p>14:39 25 Q. Is it your understanding that when the car</p>	<p style="text-align: right;">43</p> <p>14:40 1 officers will testify that when they arrived at the stopped</p> <p>2 car he was slumped to the right. What does the physical</p> <p>3 evidence tell you about what happened?</p> <p>4 A. The physical evidence indicates that when the</p> <p>14:40 5 bullet struck the decedent's head his head was upright, and</p> <p>6 we can determine that by looking at the bloodstain patterns</p> <p>7 on the clipboard that are between the passenger and driver's</p> <p>8 seat in the front seat of the squad car, that allows us to</p> <p>9 form a point of origin for those -- for those blood -- blood</p> <p>14:41 10 stains. And the second feature is that there's projected</p> <p>11 blood, which can only come from a compromised artery, for</p> <p>12 example, and that blood is projected behind and to the right</p> <p>13 side of the driver's backrest, and that would place the</p> <p>14 decedent slumped to the right at the time those projected</p> <p>15 stains struck the partition.</p> <p>16 Q. The plaintiffs in this case allege that</p> <p>17 Mr. Smith on 5th Street was trying to drive away from</p> <p>18 Detective Ciritella and that Detective Ciritella was never</p> <p>19 in danger. The plaintiffs further allege, as I've</p> <p>14:42 20 mentioned, that the detectives -- the defendants, excuse me,</p> <p>21 shot and wounded Mr. Smith after the car had stopped. The</p> <p>22 plaintiffs -- excuse me. The defendants claim that</p> <p>23 Mr. Smith narrowly missed Detective Ciritella as he drove in</p> <p>24 his direction. He accelerated around the corner, and that</p> <p>14:42 25 the defendants never fired at the car -- at the car after</p>
<p style="text-align: right;">42</p> <p>14:39 1 was on Harrison Street it was moving northbound?</p> <p>2 A. My understanding is that it was moving</p> <p>3 northbound.</p> <p>4 Q. Where were detective Ciritella's shell</p> <p>14:39 5 casings found vis-a-vis the end point of the -- of the trip,</p> <p>6 the car?</p> <p>7 A. They were found toward the back end of the</p> <p>8 car, if I'm understanding your question correctly.</p> <p>9 Q. Were they found south of the front of the</p> <p>14:39 10 car?</p> <p>11 A. South of the front of the car, that's</p> <p>12 correct.</p> <p>13 Q. If the car had been stopped and Detective</p> <p>14 Ciritella had fired his weapon, where would you have</p> <p>14:39 15 expected to find them?</p> <p>16 A. I would have expected to find them either in</p> <p>17 the same area as the car or north of the car.</p> <p>18 Q. What does the fact that they were found south</p> <p>19 of that area tell you?</p> <p>14:40 20 A. Tells me that the car was moving and</p> <p>21 continued to move after those shots were fired.</p> <p>22 Q. Okay.</p> <p>23 The plaintiffs in this case allege that</p> <p>24 Mr. Smith was slumped over the driving -- over the steering</p> <p>14:40 25 wheel. The defendants will testify -- or the police</p>	<p style="text-align: right;">44</p> <p>14:42 1 the car was stopped. Which version does the physical</p> <p>2 evidence support?</p> <p>3 A. The physical evidence clearly supports the</p> <p>4 latter version.</p> <p>14:42 5 Q. You have expressed a number of opinions today</p> <p>6 about the most likely event based on the physical evidence.</p> <p>7 Have those opinions been expressed to a reasonable degree of</p> <p>8 scientific probability?</p> <p>9 A. Yes.</p> <p>14:43 10 MR. PARKINS: Thank you. I have nothing</p> <p>11 further.</p> <p>12 Do you want to take a short break?</p> <p>13 MS. SULTON: If the doctor would like to.</p> <p>14 THE WITNESS: Yeah, short. I'm not feeling</p> <p>14:43 15 very good.</p> <p>16 MS. SULTON: Off the record.</p> <p>17 THE VIDEOGRAPHER: We're going off the</p> <p>18 record. The time is 2:43 p.m. Please stand by.</p> <p>19 (Short recess.)</p> <p>14:49 20 THE VIDEOGRAPHER: We're back on the record.</p> <p>21 The time is 2:49 p.m.</p> <p>22 Q. BY MS. SULTON: Good morning, Dr. Nord -- or</p> <p>23 good afternoon, I should say.</p> <p>24 A. Mm-hmm.</p> <p>14:49 25 Q. I am reserving all of the objections I've</p>

<p style="text-align: right;">45</p> <p>14:49 1 made prior to the point at which we began your deposition.</p> <p>2 Wanted to go through just a couple of issues with you, if I</p> <p>3 may.</p> <p>4 Do you know whether or not Mr. Ciritella is</p> <p>14:49 5 right- or left-handed?</p> <p>6 A. No. Not off the top of my head.</p> <p>7 Q. When did you look at Patrol Car 1180?</p> <p>8 A. It was in I believe June of 2006.</p> <p>9 Q. And this incident occurred September 13th of</p> <p>14:50 10 2003?</p> <p>11 A. That's correct.</p> <p>12 Q. Do you have any idea of how many people were</p> <p>13 inside that car before you saw it in the summer of 2006?</p> <p>14 A. Just from the photographs that were supplied</p> <p>14:50 15 to me showing the work that had been done, but -- but the</p> <p>16 exact number I'm not sure, but I would -- I would venture to</p> <p>17 say that several people had been in there.</p> <p>18 Q. When you looked at the car did you see the</p> <p>19 car as it was -- the state of the -- the physical state of</p> <p>14:51 20 the car as it was on September 13th, 2003, within hours of</p> <p>21 the shooting?</p> <p>22 A. No one would be in that position unless they</p> <p>23 were at the scene of the shooting and able to look at the</p> <p>24 vehicle at that time.</p> <p>14:51 25 Q. I'm sorry, Doctor. Let me try to sharpen my</p>	<p style="text-align: right;">47</p> <p>14:52 1 summer of 2006 did you see any of the photographs that the</p> <p>2 police officers or someone working on behalf of the police</p> <p>3 officers had taken of the car showing the trajectory stakes</p> <p>4 that some refer to as dowel sticks that had been put through</p> <p>14:53 5 the car and so forth?</p> <p>6 A. Yes, I did see some of those photographs.</p> <p>7 Q. And -- and did you see the photographs where</p> <p>8 someone had taken a piece of paper and tape and stuck it on</p> <p>9 top of the headliner and wrote on the word headliner?</p> <p>14:53 10 A. It's not ringing any bells for me, but I</p> <p>11 might have. I don't recall.</p> <p>12 Q. You don't deny that there might be some</p> <p>13 photographs in existence that show someone placing what</p> <p>14 appears to be kind of a clear tape kind of like a masking --</p> <p>14:53 15 kind of like a mailing tape and using that against the</p> <p>16 headliner and kind of sticking pieces of paper up there to</p> <p>17 mark certain parts of the headliner?</p> <p>18 A. I -- I don't recall that, but it's certainly</p> <p>19 possible.</p> <p>14:53 20 Q. Now, is it fair to say that when someone</p> <p>21 takes a wood dowel to try to visually show the trajectory of</p> <p>22 a bullet that they are going to -- although minutely,</p> <p>23 they're going to change the configuration of the holes</p> <p>24 through which they stick those wooden dowels?</p> <p>14:54 25 A. The answer is it depends on the material, and</p>
<p style="text-align: right;">46</p> <p>14:51 1 question a bit, if I could.</p> <p>2 A. Sure.</p> <p>3 Q. When you looked at the car it had already</p> <p>4 been cut up by other -- I assume police investigators.</p> <p>14:51 5 A. I saw evidence that prior processing had</p> <p>6 occurred, yes.</p> <p>7 Q. And it was extensive, correct?</p> <p>8 A. Yes.</p> <p>9 Q. And some of that processing included using</p> <p>14:51 10 some kind of device to actually cut the metal off one of the</p> <p>11 fenders, correct?</p> <p>12 A. Yes, I believe the fender was cut in an</p> <p>13 effort to find one of the projectiles, the bullets.</p> <p>14 Q. And the same thing had happened to at least</p> <p>14:52 15 one of the doors on the car, as well, where they had taken</p> <p>16 the -- taken the -- part of the -- well, had taken the door</p> <p>17 apart to look at the inside of the door of the car between</p> <p>18 where you have the -- what I call the creature comfort part</p> <p>19 of the door and the mechanical inner workers of the door for</p> <p>14:52 20 the window and so forth?</p> <p>21 A. Yes, I think the -- there was at least one of</p> <p>22 the rear doors, maybe both rear doors, where the -- the</p> <p>23 panel -- interior panel was -- was removed and was loose in</p> <p>24 the back see the area.</p> <p>14:52 25 Q. And prior to you looking at the car in the</p>	<p style="text-align: right;">48</p> <p>14:54 1 to the extent that one was doing a microanalysis, for</p> <p>2 example, of changes or effects on the margin of an entrance</p> <p>3 wound, for example, or an entrance to a vehicle, it might</p> <p>4 affect the -- the deposit of trace materials that were</p> <p>14:54 5 available only to the aided eye microscopically, but the</p> <p>6 presence of trajectory rods through metal bullet holes in</p> <p>7 cars through glass, Plexiglas and so forth doesn't alter the</p> <p>8 hole in any significant way.</p> <p>9 Q. Is it true, Doctor, that you can't tell when</p> <p>14:55 10 each of the 31 shots were fired at the intersection of 5th</p> <p>11 and Harrison Street?</p> <p>12 A. Yes, that's correct.</p> <p>13 Q. So you don't know when the shot was fired</p> <p>14 that actually left a bullet lodged in Mr. Smith's brain?</p> <p>14:55 15 A. I'm not sure I understand your question.</p> <p>16 Q. There were -- you know there were 31 shots</p> <p>17 that were fired at the intersection of 5th and Harrison</p> <p>18 Street.</p> <p>19 A. Yes.</p> <p>14:55 20 Q. You can't tell which of those 31 shots were</p> <p>21 fired at any particular point in time or the sequence of</p> <p>22 those shots, correct?</p> <p>23 A. Only -- only in general terms. We can't --</p> <p>24 and the reason I -- I want to be -- be clear here is that</p> <p>14:56 25 the -- the factors that involve moving the vehicle's</p>

<p style="text-align: right;">49</p> <p>14:56 1 movement, the fact of the bloodstain pattern, the impact 2 staining and the arterial spurt deposition, would indicate 3 that at the time after that shot was fired the decedent 4 went -- fell over to his right, but I couldn't be -- you 14:56 5 couldn't tell whether the 14A or 11A through the Plexiglas, 6 for example, came first. 7 Q. You don't know when out of 31 shots, which 8 one of those 31 shots in terms of the timing sequence -- 9 which one of those 31 shots is the one that was shot into 14:56 10 Mr. Smith's head? 11 A. Well, again, forgive me if I'm not being 12 responsive, but there is a certain inference, and again, 13 it's an inference based on the total -- total evidence here, 14 that if that shot to his head was the first one that struck, 14:57 15 then you would expect to see the scene appear quite 16 differently than it does. 17 Q. How? 18 A. I guess that's -- that's what I'm -- 19 Q. How? 14:57 20 A. Well, for example, if the shot incapacitated 21 him immediately, then one would expect the car to be in a 22 different position. There wouldn't be the trail of broken 23 glass here and the position of the car further north. So 24 the -- the vehicle kept moving. 14:57 25 Q. Let me ask you briefly if I could about the</p>	<p style="text-align: right;">51</p> <p>14:59 1 where it came from, when it got there? How do you know 2 that? 3 A. The volume of the glass -- again, the answer 4 is it's an inference. The volume and the shape of the glass 14:59 5 shows that it's tempered glass. Tempered glass breaks into 6 little squares. 7 Q. What do you -- what evidence do you have 8 other than that Photograph No. 10 that shows that that is 9 the Plexiglas -- I'm sorry -- the tempered glass to which 14:59 10 you refer? 11 A. Nothing other than visual identification. 12 Q. Visual through photographs? 13 A. Correct. 14 Q. You are assuming, and correct me if I'm 14:59 15 wrong, that that is the tempered glass that came from the 16 window on the passenger side of the vehicle? 17 A. I think the answer is yes, because the -- of 18 the orientation of the vehicle to the -- to the glass at the 19 side. 15:00 20 Q. Given the volume of glass that you're looking 21 at at Exhibit No. 10, do you know how much glass was left in 22 the window of the car? 23 A. I looked at the -- each of the windows of the 24 vehicle as part of my examination, and there -- there was 15:00 25 very little if any glass left in that passenger side window.</p>
<p style="text-align: right;">50</p> <p>14:57 1 broken glass. You were asked to refer to an exhibit that 2 shows a police officer pointing at what appears to be some 3 broken glass on the street. 4 A. Yes. 14:57 5 Q. Can you pull that out and tell us what 6 exhibit number that is, sir. 7 A. It's Exhibit 10. 8 Q. Thank you. 9 So when looking at Exhibit 10, did you talk 14:58 10 to that police officer during your work on this case? 11 A. I spoke with -- I'm trying to remember. Was 12 it -- 13 MR. PARKINS: Should I help the witness or 14 not? 14:58 15 MS. SULTON: No. 16 THE WITNESS: Ciritella and Brown and I 17 believe -- can't recall, but there are some other 18 photographs that were part of this set that showed the -- 19 the glass more -- in a close-up. 14:58 20 Q. BY MS. SULTON: Let me repeat the question. 21 Did you speak with the officer who is pictured in 22 Exhibit 10? 23 A. I -- I don't recognize him from the 24 photograph. 14:58 25 Q. How do you know what kind of glass that is,</p>	<p style="text-align: right;">52</p> <p>15:00 1 Q. How could you know the angles of bullets 2 going through the passenger side window if there is no glass 3 left in that window? 4 A. I never said anything about angles with 15:01 5 passenger side windows, and the answer is you can't. When 6 tempered glass is struck, sometimes the first shot will 7 remain and the window will checker, but traditionally radial 8 and concentric circles -- radial fractures and concentric 9 circles are used to establish the order of shots. Well, 15:01 10 that doesn't work with tempered glass and it doesn't work 11 with safety glass. So you can't tell. 12 Q. Can you tell whether or not the projected 13 blood about which you testified came from Mr. Smith's head, 14 his arm, his wrist, or any other place where she was shot? 15:01 15 A. Yes. 16 Q. How can you do that? 17 A. Under the microscope I observed brain tissue 18 and soft tissues associated with brain material. 19 Q. In the projected blood? 15:02 20 A. Yes. 21 Q. Let me ask you about the bullet casing that 22 was found inside the car. You testified that 23 Mr. Ciritella's gun would discharge a shell back and toward 24 the right, correct? 15:02 25 A. Correct.</p>

<p style="text-align: right;">53</p> <p>15:02 1 Q. Do you know whether or not Mr. Ciritella 2 shoots with one hand or two hands? 3 A. I don't know how any of these shots were 4 accomplished. I mean, I don't.</p> <p>15:03 5 Q. Assuming that the car was close enough to 6 Mr. Ciritella at the point at which his shell casing ended 7 up in the middle of the car, would the window have been down 8 or up at that point? 9 A. From -- from looking at the glass in the 15:03 10 window channel when I examined the vehicle, the glass would 11 have to be gone.</p> <p>12 Q. So is it fair to say, then, Dr. Nordby, that 13 the first bullet shot by Mr. Ciritella shattered the glass? 14 A. I couldn't speculate on which bullet 15:03 15 shattered the glass.</p> <p>16 Q. But it's fair to say that the first bullet, 17 since the window was up, would not have resulted in that 18 shell casing being inside the car, correct? 19 A. That's correct.</p> <p>15:04 20 Q. Can you tell whether or not Mr. Ciritella was 21 walking or running when he was firing his gun? 22 A. No.</p> <p>23 Q. Does it make a difference as to the shell 24 pattern or the -- or the placement of the shell casings on 15:04 25 the pavement?</p>	<p style="text-align: right;">55</p> <p>15:07 1 and apply physical laws. So -- 2 Q. That science as a method can help us prove 3 something false, correct? 4 A. It -- it's certainly easier to prove 15:07 5 something is not true than it is to prove that something is 6 true. However, if you prove something is not true, you've 7 just proved that something is true. There's the par docks.</p> <p>8 Q. You would agree with me that no 9 reconstruction can explain every element of an event, 15:08 10 correct? 11 A. That is correct, yes.</p> <p>12 Q. And you would agree with me that when using 13 the scientific method the facts and data considered as you 14 reach your conclusion -- in other words, in reaching your 15:08 15 conclusion when using a scientific method, your conclusion 16 is only as good as the facts and data you have considered? 17 A. That's correct.</p> <p>18 Q. So if the information you considered is 19 incorrect, then your conclusion is incorrect? 15:08 20 A. Well, that doesn't follow.</p> <p>21 Q. Why is that? 22 A. Because we could get the correct answer for 23 completely accidental reasons. We can -- we can use faulty 24 method and incredible errors and still come up coincidentally 15:08 25 with a true conclusion. So what's interesting in science is</p>
<p style="text-align: right;">54</p> <p>15:04 1 A. Only a theoretical difference. If -- if 2 someone is running, let's say, in a specific direction, and 3 one is running in the same direction that one is firing, 4 then regardless of where the cartridge case, let's say, is 15:05 5 ejected, the motion of the gun and -- through space relative 6 to the ground will carry over to that shell casing. But our 7 ability to measure that is negligible in this case.</p> <p>8 Q. Do you know how many times Patrol Car 1180 9 was moved prior to the point at which you examined the car? 15:05 10 A. No, I don't.</p> <p>11 Q. Is it correct, Doctor, that in -- as a matter 12 of principle, that in science you cannot prove a thing true? 13 A. I -- I don't understand your question.</p> <p>14 Q. Can science prove a fact true? 15:06 15 A. If -- if something is a fact, then it is 16 true.</p> <p>17 Q. Can the scientific method prove something 18 true? 19 A. I must say I don't understand your question.</p> <p>15:06 20 I mean -- 21 Q. Science is a -- science is a method of 22 inquiry, correct? 23 A. I think it's a little more complicated. The 24 scientific method is a way of disciplining our inferences so 15:07 25 that they obey established logical laws and help us discover</p>	<p style="text-align: right;">56</p> <p>15:08 1 the reliability of an inference, not whether or not the 2 conclusion is true all the time.</p> <p>3 Q. Well, at Page 7 of your report, Doctor, you 4 assume as true that Mr. Ciritella was about two feet away as 15:09 5 Mr. Smith drove by him. Assuming that that fact is not 6 true, does that change the conclusion that you have reached? 7 A. Could you show me where that is again so I 8 can respond properly?</p> <p>9 Q. Yes, sir. It is at Page 7 in the first full 15:09 10 paragraph. 11 A. Which report, the supplemental or the -- 12 Q. The original report, sir. 13 A. Okay. Thank you.</p> <p>14 Q. You're welcome. 15:09 15 So if you go to -- in your original report -- 16 A. Yes.</p> <p>17 Q. The top of Page 7, the second line from the 18 bottom of the first full paragraph. You'll see it's -- it 19 says, "about two feet away as Smith drove by him." 15:09 20 A. You're -- you're above the summary opinions 21 and conclusions? 22 Q. Yes, sir. 23 A. Okay.</p> <p>24 Q. Yeah, that if you come up to that first 15:10 25 paragraph there.</p>

<p style="text-align: right;">57</p> <p>15:10 1 A. Okay.</p> <p>2 Q. And then come down to the second line?</p> <p>3 A. I'm sorry, I -- what am I looking for, again?</p> <p>4 I'm having trouble finding it. Show me in there.</p> <p>15:10 5 Q. I put just a little black mark in the margin.</p> <p>6 A. Great. Thank you.</p> <p>7 Q. You're welcome. Thank you.</p> <p>8 A. Oh, right.</p> <p>9 Q. Okay.</p> <p>15:10 10 A. Okay.</p> <p>11 Q. So is it fair to say, Doctor, that I read</p> <p>12 that correctly, that you -- you're assuming that</p> <p>13 Mr. Ciritella was about two feet away as Mr. Smith drove by</p> <p>14 him?</p> <p>15:10 15 A. No, because the section of the report that</p> <p>16 you refer to is a -- is entitled a brief summary of reported</p> <p>17 events, and that's what I was told.</p> <p>18 Q. Okay. So I'm saying --</p> <p>19 A. So --</p> <p>15:11 20 Q. So my question is that if that fact is not</p> <p>21 correct, does that change your opinion? In other words, if</p> <p>22 Mr. Ciritella is further away or closer to the car, does it</p> <p>23 change your opinion in any way?</p> <p>24 A. Well, I guess the answer is that the my</p> <p>15:11 25 opinion has to correspond with what the physical evidence</p>	<p style="text-align: right;">59</p> <p>15:12 1 Q. Do you know whether the photograph was taken</p> <p>2 at the scene, before the car was moved, or whether it was</p> <p>3 taken at a garage somewhere?</p> <p>4 A. I believe that it's part of a set of</p> <p>15:13 5 photographs that was taken at the scene, then my belief</p> <p>6 is -- is based on the fact that other photographs in that</p> <p>7 sequence of photographs show images of things at the scene.</p> <p>8 So it's an inference again. I mean, I wasn't there and I</p> <p>9 don't know, but the only reasonable way that I could try to</p> <p>15:13 10 tell would be to look at the images that came before and</p> <p>11 came after. So I -- I don't know.</p> <p>12 Q. If I could ask you to stay on Page 7 of your</p> <p>13 report for a moment, Dr. Nordby.</p> <p>14 A. Sure.</p> <p>15:13 15 Q. Look right above where you have in bold type</p> <p>16 "Summary: Opinions and Conclusions" and the lines right</p> <p>17 in -- right ahead of that. I see the word "handcuffed" and</p> <p>18 "began CPR."</p> <p>19 A. Correct.</p> <p>15:14 20 Q. Is it possible to do CPR if someone is</p> <p>21 handcuffed with their hands behind them?</p> <p>22 A. Sure.</p> <p>23 Q. And how would one do that?</p> <p>24 A. Well, I -- I mean, it depends on the</p> <p>15:14 25 technique, but mouth to mouth is certainly possible, chest</p>
<p style="text-align: right;">58</p> <p>15:11 1 shows, and regardless of who's telling the story or giving</p> <p>2 me the scenario of what happened, what I can testify to is</p> <p>3 that the presence, for example, of the cartridge case in the</p> <p>4 vehicle has certain implications, meaning that there had to</p> <p>15:11 5 be some proximity of the weapon discharging the cartridge</p> <p>6 case and the -- the vehicle. But I don't assume that he was</p> <p>7 two feet, 10 feet or 20 feet away. I'm trying to interpret</p> <p>8 the behavior of the pistol, how the pistol actually</p> <p>9 functions, how -- what has to be true for a cartridge case</p> <p>15:12 10 to go into the front seat of the car. I mean, there --</p> <p>11 there can't be glass in the way or it would bounce off. So</p> <p>12 we can start whittling down what's -- what has to be so,</p> <p>13 even though we may not know exactly what is so.</p> <p>14 Q. Did you see the cartridge in the car when you</p> <p>15:12 15 looked at the car or did you just see a photograph?</p> <p>16 A. I just saw a photograph.</p> <p>17 Q. So you never saw the cartridge in the car?</p> <p>18 A. No.</p> <p>19 Q. And you don't know when that photograph was</p> <p>15:12 20 taken?</p> <p>21 A. Well, I was told when it was taken. Whether</p> <p>22 that's true or not depends on --</p> <p>23 Q. When were you told it was taken?</p> <p>24 A. I'd have to look at my notes. I don't -- I</p> <p>15:12 25 don't know.</p>	<p style="text-align: right;">60</p> <p>15:14 1 compressions are possible. I'm not sure I'm following your</p> <p>2 question.</p> <p>3 Q. Do you know of any cases where someone has</p> <p>4 been able to do effective CPR when the person is handcuffed</p> <p>15:14 5 with their hands behind their back?</p> <p>6 A. I don't know of any cases either way, I</p> <p>7 guess. By the time I arrive they're -- they're usually</p> <p>8 dead, so I don't know if resuscitative efforts were -- were</p> <p>9 accomplished unless -- or tried unless they're documented.</p> <p>15:15 10 Q. Do you know of any literature that suggests</p> <p>11 that a proper way to do CPR when is a person's hands are</p> <p>12 cuffed behind their back?</p> <p>13 A. Well, I would -- I would think that that's</p> <p>14 not part of the course offered by the Red Cross, but I</p> <p>15:15 15 don't -- I don't see anything that would -- would prevent it</p> <p>16 from occurring. It would certainly be more challenging.</p> <p>17 Q. I want to show you what has been marked,</p> <p>18 although not yet admitted, but what has been marked as</p> <p>19 Plaintiff's Exhibit No. 4. And we're going to mark it for</p> <p>15:15 20 the purposes of this Deposition Exhibit No. 13.</p> <p>21 (Deposition Exhibit 13 was marked</p> <p>22 for identification.)</p> <p>23 Q. BY MS. SULTON: So Doctor, you're being</p> <p>24 handed Exhibit No. 13.</p> <p>15:16 25 A. Yes.</p>

<p style="text-align: right;">61</p> <p>15:16 1 Q. Do you have it right side up?</p> <p>2 A. (No audible response.)</p> <p>3 Q. Have you seen that exhibit before?</p> <p>4 A. Yes, I believe I have.</p> <p>15:16 5 Q. Have you used that exhibit as a basis for the</p> <p>6 opinions that you have reached?</p> <p>7 A. No.</p> <p>8 Q. Can you tell me about the -- the two</p> <p>9 bullet -- so you see two holes in his back, correct?</p> <p>15:16 10 A. That's correct.</p> <p>11 Q. And how did you reach your opinion about the</p> <p>12 bullet wounds to Mr. Smith's back if you didn't use that</p> <p>13 exhibit in forming your basis of your opinion?</p> <p>14 A. Well, I used the description provided by the</p> <p>15:17 15 autopsy, describing the position of the bullets as being</p> <p>16 approximately 11 inches from the top of the head,</p> <p>17 approximately inch and a quarter, two inches from midline,</p> <p>18 so on. And what that does for me is that the description of</p> <p>19 their location in space is what I'm interested in, and --</p> <p>15:17 20 and my -- my particular role is to try to make correlations</p> <p>21 between injuries here that are described by a pathologist</p> <p>22 and the physical damage to the vehicle. If Mr. Smith is in</p> <p>23 the driver's seat of the vehicle, if these bullet -- these</p> <p>24 are, in fact, bullet entries as described by the</p> <p>15:17 25 pathologist, and if -- if they were inflicted on the -- the</p>	<p style="text-align: right;">63</p> <p>15:19 1 pathologist is a wound of entrance and that -- of the</p> <p>2 photographs that I have seen of the side of Mr. Smith's head</p> <p>3 certainly support the view that that's a wound of entrance.</p> <p>4 Up here.</p> <p>15:19 5 Q. Well, since you have opined about the wound</p> <p>6 to his forehead, are you in a position to opine about the</p> <p>7 wound on the back of his head?</p> <p>8 A. Well, I -- I opined about the wound to the</p> <p>9 forehead based on a description by the pathologist and my</p> <p>15:19 10 observation of the windshield of the -- of the police car.</p> <p>11 I don't have any -- any such basis to talk about anything on</p> <p>12 the back without -- without referring to what the</p> <p>13 pathologist said.</p> <p>14 Q. Now, you don't talk in your report, unless I</p> <p>15:20 15 missed it, about the bullets shot by Mr. Dempsey and</p> <p>16 Mr. Kurten. Do you know whether or not Mr. Dempsey or</p> <p>17 Mr. Kurten was the one who shot Mr. Smith in the back?</p> <p>18 A. No.</p> <p>19 Q. Why don't you know?</p> <p>15:20 20 A. I was not provided with either of their</p> <p>21 weapons to do any kind of comparison or any kind of testing</p> <p>22 with. The issues of -- of those injuries I was not asked</p> <p>23 to -- to address, so I -- I didn't address them.</p> <p>24 Q. Well, isn't it important to know who shot</p> <p>15:20 25 Mr. Smith in the back?</p>
<p style="text-align: right;">62</p> <p>15:18 1 decedent when he was driving this car, then they had to</p> <p>2 somehow go through the windows of the car or the body of the</p> <p>3 car or some other components of the car in order to strike</p> <p>4 at this position. So I didn't rely on any photographs to --</p> <p>15:18 5 to look at the physical status of the squad car.</p> <p>6 Q. So take a look at the back of his head. Do</p> <p>7 you know what that is?</p> <p>8 A. No.</p> <p>9 Q. It appears to be some kind of injury, doesn't</p> <p>15:18 10 it?</p> <p>11 A. It could be.</p> <p>12 Q. Is that a bullet hole injury, can you tell?</p> <p>13 A. I certainly can't tell from a photograph.</p> <p>14 Q. So you don't know if that's an entry or exit</p> <p>15:18 15 point for -- for the bullet, correct?</p> <p>16 A. For -- for what bullet?</p> <p>17 Q. For the bullet that went into his brain.</p> <p>18 A. No.</p> <p>19 Q. You don't know, do you?</p> <p>15:18 20 A. It was -- it was not a perforating wound, it</p> <p>21 was described as a penetrating wound with the bullet</p> <p>22 recovered.</p> <p>23 Q. So how do you know Mr. Smith wasn't shot in</p> <p>24 the back of the head versus on the side of the head?</p> <p>15:19 25 A. Well, 1st all, the wound described by the</p>	<p style="text-align: right;">64</p> <p>15:20 1 MR. PARKINS: Objection.</p> <p>2 You can answer.</p> <p>3 THE WITNESS: Given -- given the issues that</p> <p>4 were put to me, the answer would be not as significant as</p> <p>15:21 5 knowing or not significant in the sense that we only need to</p> <p>6 know they came from behind and from the rear and they were</p> <p>7 nonfatal, according to the pathologist.</p> <p>8 Q. BY MS. SULTON: But that's not what the</p> <p>9 pathologist said. The pathologist said that all bullets</p> <p>15:21 10 shot contributed to his death. She aggravated them -- she</p> <p>11 ago -- aggregated them?</p> <p>12 MR. PARKINS: Objection to the form, but you</p> <p>13 can answer.</p> <p>14 THE WITNESS: Yeah. I mean, that's very</p> <p>15:21 15 speculative. I wouldn't have any way of responding. I</p> <p>16 don't know what to say about that.</p> <p>17 Q. BY MS. SULTON: Now, you testified that all</p> <p>18 Mr. Smith's gunshot wounds were fired from more than three</p> <p>19 feet, 36 inches away. I'm now looking at Page 9 of your</p> <p>15:21 20 report, sir, Paragraph 16.</p> <p>21 What evidence do you have to support that?</p> <p>22 A. The characteristic of the -- of the wounds</p> <p>23 described by the pathologist, the lack of gunshot residue,</p> <p>24 the lack of powder, stippling, anything that suggests a</p> <p>15:22 25 closer or -- close-range gunshot, and the -- the deformation</p>

<p style="text-align: right;">65</p> <p>15:22 1 of the rounds having struck intermediate targets before they 2 struck Mr. Smith. 3 Q. But again, that's based upon you looking at a 4 car two and a half years after the incident, correct? 15:22 5 A. That's correct. 6 Q. And is it fair to say that when you talk 7 about all Mr. Smith's gunshot wounds were fired from more 8 than 30 -- from three feet, 36 inches away, you're not 9 talking about the gunshot wound to his leg? 15:22 10 A. That's correct. I -- I didn't consider that. 11 Q. And if there is videotape -- if there's a 12 videotape showing that Mr. Smith was shot by Officer 13 Whitehead while Mr. Smith was in the car before the car door 14 closed, does that change your opinion about the absence of 15:23 15 these metallic substances that help you identify the 16 distance from which a shot is fired? 17 A. Well, in my report I also describe factors 18 that influence the deposition of those materials, and 19 without looking at -- at the particular weapon and knowing 15:23 20 that ammunition, which -- which I believe is the same 21 ammunition, it would be very difficult to -- to make an 22 opinion about it, since that, you know, different 23 environmental factors, the -- the angle at which the gun is 24 held, the proximity to the -- to the target and so forth. 15:24 25 But generally on the outside of a vehicle I wouldn't expect</p>	<p style="text-align: right;">67</p> <p>15:26 1 of Mr. Smith and discharged his weapon inside that car 2 before that car door closed. 3 A. Then I would expect to find -- on a pair of 4 long pants I would expect to find perhaps traces of 15:26 5 antimony, barium and lead. If we looked at the sill -- the 6 door sill on the -- on the vehicle, there might be trace 7 evidence there. So -- so that would certainly -- again, 8 depending on how much blood and so forth, that can affect 9 the success or the failure to find something. But again, I 15:26 10 looked for gunshot residue on the decedent's clothing and 11 they were short pants, not long pants. And I also looked in 12 the headliner and the visor, sun visors, for gunshot 13 residue, but I did not look at the door panel down below. 14 Q. Did you look at the door panel on the 15:27 15 passenger side? 16 A. No. 17 Q. And when we talk about short pants, we're 18 talking about short pants as young men wear them, so they 19 actually come below the knee, correct? 15:27 20 A. Some even further that about. 21 Q. But I'm talking about the pants that 22 Mr. Smith had on at the time of the shooting -- 23 A. Right. 24 Q. Were -- although we do call them short pants, 15:27 25 they're actually pants that come beyond the knee, correct?</p>
<p style="text-align: right;">66</p> <p>15:24 1 to find the primer residues on the headliner inside the 2 vehicle unless the gun itself was inside the vehicle. 3 Q. Well, what I'm saying is that -- and maybe I 4 didn't state the question clearly enough. There is a 15:24 5 videotape that we have that is going to be admitted into 6 evidence. That shows Harry Smith getting into the car, 7 Officer Whitehead shoots him, and then the car door closes. 8 So we know that there is a shot in the car. We know that. 9 So my question is that since we know that to be true, the 15:25 10 absence of finding any of this gunshot residue material that 11 you testified about doesn't necessarily mean, therefore, 12 that there was no gunshot in that car, since we know that 13 there was at least one shot. 14 A. I think -- 15:25 15 MR. PARKINS: Before you answer, objection to 16 the form of the question, but you can answer. 17 THE WITNESS: The -- the difficulty I'm 18 having understanding your question is shot in the car. Does 19 that mean that the gun itself is inside the vehicle? 15:25 20 Q. BY MS. SULTON: Yes, sir. 21 A. Or does it mean that the shot went into the 22 vehicle and -- and what is the orientation of the slide to 23 the discharge of the weapon? In other words -- 24 Q. I want you to assume, sir, that the videotape 15:25 25 confirms that Mr. Whitehead was within three feet for sure</p>	<p style="text-align: right;">68</p> <p>15:27 1 A. Yes. Yeah, and I don't know what position 2 those garments were in when the shot was fired. 3 Q. I want to ask you something about -- and let 4 me know whenever you need to take a break, Doctor. 15:27 5 A. Thank you. 6 Q. We will certainly work with your schedule, 7 sir. 8 I want to ask you something about the 9 behavior or conduct of bullets. You testified that when 15:28 10 testing Mr. Ciritella's gun, that the shell casing would 11 spin in the air, be in the air for a while, and then gravity 12 would pull it down, correct? 13 A. Can happen that way, yes. 14 Q. That -- we know the surface on which the 15:28 15 bullets fell was either concrete or asphalt, correct? 16 A. Correct. 17 Q. Does the surface on which the shell casings 18 fell in this case make a difference as to the behavior of 19 that shell casing upon impact with the ground? 15:28 20 A. The -- the answer is yes, different surfaces 21 can behave differently when brass cartridge cases hit those 22 surfaces, and -- and to really appreciate those -- those 23 differences one would have to shoot a whole lot of 24 ammunition and compare, let's say, concrete with asphalt, 15:29 25 with different surfaces, and at different angles, as well.</p>

<p style="text-align: right;">69</p> <p>15:29 1 Q. Is it fair to say that a brass shell 2 casing -- and I'm now talking about this case -- hitting the 3 kind of surfaces that we know are present in this case, 4 there's cement, there may be asphalt, as well, but we know 15:29 5 there's cement. Is it fair to say that the shell casing 6 upon impact with the ground would bounce and perhaps roll? 7 A. Could -- it could do, yes. 8 Q. Could do both, correct? 9 A. Yes, could. 15:29 10 Q. Now, is it fair, then, to assume that the 11 point at which we find a shell casing on the ground might 12 not necessarily have a whole lot to do with where that -- 13 where the shooter was standing when he or she fired a shot, 14 correct? 15:29 15 A. If you look at the -- the testing that I did, 16 and I made a chart, you know, to show the distances and so 17 forth, there's a wide variety of different distances, both 18 measured away from the side of the test pistol, and away 19 from the muzzle. So it can happen that -- and did, in fact, 15:30 20 in my experiments, that the ejected shell casing hit my 21 shoulder and that affected where it -- it went. So there is 22 a wide variety, and one also has to be cautious about 23 reaching too specific a conclusion other than talking about 24 general areas, where there's a location of these things. 15:30 25 But I think forensic science goes wrong if we try to be too</p>	<p style="text-align: right;">71</p> <p>15:32 1 We're going off the record. The time is 3:32 p.m. Please 2 stand by. 3 (Short recess.) 4 THE VIDEOGRAPHER: This marks the beginning 15:38 5 of Tape No. 2, Volume I, in the deposition of Jon J. Norby, 6 B pH. Did he are back on the record. The time is 3:38 p.m. 7 MS. SULTON: Thank you, sir. 8 Q. So Mr. -- I'm sorry, Dr. Nordby, we're at 9 Page 14. I believe you were pointing me to your Test 1 15:38 10 Line 3. 11 A. Yes. 12 Q. It says "Lateral Distance from Slide, 13 114 inches," then "Distance to Back or Front of Slide, 14 0 inches." Tell me what that means. 15:39 15 A. Well, that means that when we measured the -- 16 I established a fixed location, if you look at the appendix 17 you can see the setup documented, but it would be 114 inches 18 lateral distance. That is, going from the side of the 19 pistol. It -- it's 114 inches that way. And then zero 15:39 20 degrees either to the back, to the front, or zero means it 21 just went straight out. And what influenced the travel of 22 the -- of the cartridge case could be that it -- it struck 23 the shooter's arm, it struck me, it struck my shoulder, came 24 back, ricocheted, and then ended up, and in this case I 15:39 25 recall the shot, the cartridge case came backward and hit my</p>
<p style="text-align: right;">70</p> <p>15:30 1 precise, because the -- the random nature of these events 2 has to be taken into consideration. 3 Q. Before we switch tape in about two minutes, 4 Dr. Nordby, you reference your report. Am I correct to look 15:31 5 at Pages 14 and 15, when you talk about the wide variety of 6 distances, or is there another place in your report to which 7 you can direct me? 8 A. Yeah, I believe it's 14 and 15. 9 Q. So to make certain that I am correctly 15:31 10 reading the data that you have here, sir -- 11 A. Mm-hmm. 12 Q. Can you tell us what this wide difference of 13 distance is? 14 A. Well, in -- in each case I moved six inches 15:31 15 after each shot. Okay? Just to -- to give us a -- an 16 increasing measurement. So in some cases the lateral 17 distance from the slide, for example, No. 3, is 114 inches, 18 and it went backward zero inches. 19 Q. Okay, so let me stop you for a second. How 15:32 20 much time do we have on the tape? 21 Let us take a break so we can switch tapes. 22 A. Okay. 23 MS. SULTON: Thank you. 24 THE VIDEOGRAPHER: This marks the end of Tape 15:32 25 No. 1, Volume 1, in the deposition of Jon J. Norby, Ph.D.</p>	<p style="text-align: right;">72</p> <p>15:39 1 shoulder and then continued its path that way, so it ended 2 up 114 inches away right straight, even though it didn't 3 actually go straight. 4 Q. So if the gun is pointing straight head -- so 15:40 5 let's assume that the shooter's arm is straight and the -- 6 the barrel of the pistol is pointing forward, if I'm looking 7 at Test 1 Line 3, the 114 inches -- 8 A. Mm-hmm. 9 Q. -- that shell casing would kick out to the 15:40 10 side 114 inches? 11 A. Mm-hmm. 12 Q. And then the lowest number was 69 inches. 13 A. That's correct. 14 Q. And then let me take you to Test 2. Those 15:40 15 distances are -- are different. Can you -- pick whichever 16 round you'd like and explain to me why Test 2 results are so 17 different from test 1. 18 A. The difference is that the three shots are 19 fired from a single location as quickly as you can squeeze a 15:41 20 trigger, and the -- the function of the pistol slide and its 21 ejection mechanism, the volume of the gases that -- that 22 function to move the slide, to reload the next cartridge and 23 to eject the spent cartridge case will be different because 24 you're introducing new explosions or detonations as -- as 15:41 25 the other ones are still leaving some effect. So there can</p>

<p style="text-align: right;">73</p> <p>15:41 1 be some dis -- difference in the way multiple shots interact 2 with one another. It also can be the case that the 3 cartridge cases hit each other. 4 Q. Okay. 15:42 5 So if I look at, say, Round No. 2, I'm now in 6 Test 2 at the top of Page 15. 7 A. Mm-hmm. 8 Q. Am I correct -- am I reading the table 9 correctly assuming that my arm is out straight in front of 10 me, the pistol muzzle is pointing straight -- 11 A. Mm-hmm. 12 Q. That the shell kicked out 96 inches behind me 13 and then 38 inches to the side? 14 A. Well, what -- what this data tells you is not 15:42 15 exactly as you phrased it, but it tells you that where -- 16 where it -- in reference to where it started where it ended 17 up. It doesn't tell you how it got there. You see what I 18 mean? 19 Q. Ah. Okay. 15:42 20 A. It -- it -- it could have hit, rolled and 21 bounced, it could -- and did, in fact, and most of these 22 things, they -- they travel -- they roll, they spin, and the 23 variability -- why we have to be so cautious in reaching 24 conclusions about the position of cartridge cases is because 15:43 25 you can't isolate a single cartridge case and make any</p>	<p style="text-align: right;">75</p> <p>15:44 1 things appear as they do, and we may not be in a position to 2 know what those are. 3 Q. I am almost done, Doctor. Let me just review 4 my notes here. 15:45 5 A. Okay. 6 Q. Quickly. 7 I wanted to ask you as a follow-up to a 8 question asked by Attorney Parkins, what is the total amount 9 that you have been paid for your testimony in this case? 15:45 10 MR. PARKINS: Objection to the form. 11 THE WITNESS: Yeah, I haven't been paid 12 anything for my testimony. 13 Q. BY MS. SULTON: I'm sorry. Let me rephrase 14 it. How much have you been paid for your work on this case? 15:45 15 A. I think the expenses included total about 16 \$75,000. 17 Q. And at this point is it over 80,000? 18 A. I -- I don't know. 19 Q. And you spent one week in Wilmington, 15:46 20 Delaware, looking at the car, correct? 21 A. With my lab assistant, yes. 22 Q. And then you've written reports and done the 23 consultation with the defense, correct? 24 A. A lot of experiments, laboratory work, 15:46 25 firearms, setting up targets, et cetera.</p>
<p style="text-align: right;">74</p> <p>15:43 1 meaningful estimate about anything other than the general 2 area where someone might have been, because of that 3 variability. Not only just the surface but the random 4 nature of some of these events interacting. So it can be 15:43 5 one hitting another when more than one round is -- is fired 6 in quick succession, it can be rolling and spinning, and it 7 may depend on if the cartridge case is -- has a rotational 8 force, then depending on whether it lands on its top, it's 9 bottom or its side can influence where it goes. 15:44 10 Q. Well, let me -- so is it fair, then, to 11 assume that when we look at some of the pictures that I know 12 that you've seen that were taken by the police department, 13 where they have shell casings circled and then there's a 14 little number marker -- 15:44 15 A. Mm-hmm. 16 Q. We can't then assume by looking at those 17 pictures that that's where the -- where the person was 18 standing when the shot was fired, all we know is that that's 19 a piece of evidence that's been marked? 15:44 20 A. That is correct. The way scenes are 21 processed, every effort is made or ought to be made to 22 document physical evidence and their presence -- its 23 presence, its location and so forth. But any interpretation 24 of that has to be subject to some sort of scientific 15:44 25 process. There may be many explanations for why certain</p>	<p style="text-align: right;">76</p> <p>15:46 1 Q. In the last five years, Doctor, is it fair to 2 say that you have earned -- the primary source of your 3 income has been from testifying as a professional witness? 4 A. No. I'm not a professional witness, I'm a 15:46 5 scientist. 6 Q. Let me rephrase that, sir. 7 Is it fair to say in the last five years that 8 the primary source of your income has been from serving as a 9 expert in cases that are being litigated? 15:47 10 A. Yes. 11 Q. And your education, your bachelor's degree, 12 your master's degree and your doctorate degree are in the 13 field of philosophy? 14 A. Philosophy of science, yes, that's correct. 15:47 15 Q. Your bachelor's degree is -- is it a B.S. or 16 B.A.? 17 A. It's a B.A. 18 Q. And that is a Bachelor of Arts, correct? 19 A. That's correct. 15:47 20 Q. And your master's is an M.A., correct? 21 A. That's correct. 22 Q. That's a Master of Arts? 23 A. That's correct. 24 Q. And your doctorate degree is a doctorate of 15:47 25 philosophy?</p>

<p style="text-align: right;">77</p> <p>15:47 1 A. That's correct.</p> <p>2 Q. In the field of philosophy?</p> <p>3 A. That's correct.</p> <p>4 Q. And your dissertation title was?</p> <p>15:47 5 A. Critical intelligence and its development."</p> <p>6 Q. And you retired from Pacific Lutheran</p> <p>7 University in the year 2001?</p> <p>8 A. I believe it -- I'm not sure how they count</p> <p>9 that. I last taught in 1997. I'm not sure how the -- how</p> <p>15:48 10 that works.</p> <p>11 Q. And you retired from the department of</p> <p>12 philosophy, correct?</p> <p>13 A. That's correct.</p> <p>14 Q. Just one moment. I'm almost done reviewing</p> <p>15:49 15 my notes, Doctor. I appreciate your patience.</p> <p>16 A. No problem.</p> <p>17 Q. Doctor, do you farm out some of your lab work</p> <p>18 to other labs or other professionals who do forensic work?</p> <p>19 A. Only if it is an area that I develop evidence</p> <p>15:49 20 about that I don't work in. For example, DNA, I don't do</p> <p>21 DNA work. I don't do fingerprint analysis. So those would</p> <p>22 be put off to others. But in most cases I -- I take on</p> <p>23 cases that apply to my set of skills and training and</p> <p>24 experience.</p> <p>15:50 25 Q. Did you farm out any of the work in this case</p>	<p style="text-align: right;">79</p> <p>15:52 1 there's a question that can actually be made to go away,</p> <p>2 that there really isn't a scientific question there at all</p> <p>3 that needs to be answered and if I can point that out to the</p> <p>4 attorney, then they don't need an expert of any kind.</p> <p>15:52 5 Q. Did you ever -- were you ever asked in this</p> <p>6 case to be an advocate on behalf of any position?</p> <p>7 A. No.</p> <p>8 Q. Let's focus a little bit on the chart in your</p> <p>9 report, on Pages 14 and 15.</p> <p>15:52 10 A. Yes.</p> <p>11 Q. The chart there indicates lateral distance</p> <p>12 from the slide.</p> <p>13 A. Yes.</p> <p>14 Q. [[Do you recall that?</p> <p>15:52 15 A. Yes.</p> <p>16 Q. Were these distances to the right of the</p> <p>17 weapon?</p> <p>18 A. Yes.</p> <p>19 Q. Did any of the shells eject or end up to the</p> <p>15:52 20 left of the weapon?</p> <p>21 A. No.</p> <p>22 Q. Did you -- in your opinion that the properly</p> <p>23 car was still moving, did you consider the possibility that</p> <p>24 the shell casings may have ended up north of the properly</p> <p>15:53 25 car and simply rolled downhill?</p>
<p style="text-align: right;">78</p> <p>15:50 1 in --</p> <p>2 A. No.</p> <p>3 Q. You did all the work yourself?</p> <p>4 A. I have a lab assistant who helps, but . . .</p> <p>15:50 5 MS. SULTON: I am done. Thank you, Doctor.</p> <p>6 THE WITNESS: Thank you.</p> <p>7 MR. PARKINS: I have just a few questions in</p> <p>8 redirect.</p> <p>9 Q. Let's follow up on your -- your work as</p> <p>15:51 10 consulting for attorneys. Do you consult with attorneys for</p> <p>11 both plaintiffs and defendants?</p> <p>12 A. Yes.</p> <p>13 Q. Do you limit your practice in any way in that</p> <p>14 regard?</p> <p>15:51 15 A. No.</p> <p>16 Q. Have you ever had occasion to tell an</p> <p>17 attorney that you cannot assist him or her?</p> <p>18 A. Yes.</p> <p>19 Q. What causes you to do that?</p> <p>15:51 20 A. Well, several things might. First would be</p> <p>21 if I don't think that my training applies to the issues that</p> <p>22 they recognize as relevant to their case. Secondly, if</p> <p>23 their request is that I become an advocate for a particular</p> <p>24 position and I can tell sometimes when I'm asked to find X,</p> <p>15:51 25 Y or Z and I will not do that, or if in some cases there --</p>	<p style="text-align: right;">80</p> <p>15:53 1 A. Yes, I -- I considered that. Part of the</p> <p>2 caveat or caution that we have in doing any kind of ejection</p> <p>3 pattern testing is making sure that you're dealing with</p> <p>4 broad areas as opposed to, you know, making too much about</p> <p>15:53 5 one cartridge case being in a specific position. So -- so</p> <p>6 that I went to the scene and I measured the slope, which was</p> <p>7 approximately seven degrees, I considered that. I</p> <p>8 considered the broad areas that these cartridge cases were</p> <p>9 documented to be found, and compared them with what my</p> <p>15:53 10 results were, and I found none that would indicate that</p> <p>11 there's a -- a cartridge case to the north of the front of</p> <p>12 the squad car.</p> <p>13 Q. Did you -- you were asked some questions</p> <p>14 about the condition of the car at the time you examined it.</p> <p>15:54 15 Do you have any reason to believe that the previous work</p> <p>16 done on the car by the Wilmington Police Department and the</p> <p>17 subsequent movement of the car after this incident in any</p> <p>18 way affects your conclusions?</p> <p>19 A. No, it doesn't. The fact of the matter is</p> <p>15:54 20 that in -- in almost every case there is some issue about</p> <p>21 handling the evidence, preserving, collecting and storing</p> <p>22 the evidence. That's a given that we work with.</p> <p>23 The question to address from the scientific</p> <p>24 point of view is does anything in the way the evidence was</p> <p>15:55 25 collected, handled or stored affect the examinations that</p>

<p style="text-align: right;">81</p> <p>15:55 1 are being conducted. In the case of -- of bullet holes, for 2 example, the issue is quite different than if it were the -- 3 the presence of sperm heads in -- in a -- in cells. So -- 4 so the -- the appropriate caution has to be applied. If -- 15:55 5 if it looks like the evidence has been contaminated in some 6 irretrievable sense, then documenting that will be the 7 extent of the scientific report that would be produced. But 8 in this case the bullet holes remain unaffected by storage, 9 the removal of the door panels, while it certainly could 15:56 10 mitigate against any gunshot residue testing that -- that 11 might, you know, be done, the blood stains and so forth are 12 not affected by the way this evidence was kept. 13 MR. PARKINS: Thank you. 14 MS. SULTON: Just a couple of follow-up 15:56 15 questions, Doctor, and thank you for your patience. I will 16 be brief. First let me take you back to Page 14 and 15, if 17 I could. I just want to make certain that given the 18 redirect, that I understand these tables correctly. 19 THE WITNESS: Okay. 15:56 20 Q. If I look at Test 1 on Page 14, I am reading 21 this table that says that the lateral distance from the 22 slide, meaning the side distance, could be, based on your 23 testing of -- of the Detective Ciritella's pistol, is as 24 great as 173 inches, and the distance back beyond one's -- 15:57 25 or the back of the -- the slide of the gun, is 121 inches,</p>	<p style="text-align: right;">83</p> <p>15:58 1 Q. And what case was that? 2 A. That was -- I'm trying to think. 3 There was a -- an Arizona case. It should be 4 on my list. 15:58 5 Q. Would you mind taking a moment to take a look 6 at the list you provided us? 7 A. There -- 8 Q. I think it starts at Page 30 -- 9 A. I don't have that. 15:58 10 Q. 31? 11 A. The other involved a moving train. 12 Q. Was it a car or train? 13 A. A train. 14 Q. All right. So you have done a case involving 15:59 15 shooting at a moving train? 16 A. Right. 17 Q. But you haven't done a prior case shooting at 18 a moving car? 19 A. I've -- I've worked the case but not 15:59 20 testified on the case. 21 Q. And is that case listed here? 22 A. Those are -- the cases that are listed there 23 are cases for which I've given testimony. 24 Q. Yes, sir. 15:59 25 A. And the cases that I've worked and written</p>
<p style="text-align: right;">82</p> <p>15:57 1 correct? 2 A. Those are the maximums that I detected in my 3 experiments, yes. 4 Q. And then if I look at Test 2, when shooting 15:57 5 three shots from a single location, the greatest distance 6 that you found laterally or to the side is 98 inches, and 7 the greatest distance to the back of the slide of the gun is 8 96 inches. 9 A. Correct. 15:57 10 Q. So we're really talking about a broad pattern 11 that these shells can fly on their own, correct? 12 A. Now, that's a point that -- that needs to be 13 clarified too. These numbers don't represent the flight in 14 the air. They represent where it started and where it 15:57 15 ended. And that could be something like -- just for 16 example, the -- the cartridge case going straight into the 17 ground right where it was fired from and then bouncing, 18 rolling and tumbling and so forth until it reaches its final 19 terminus. So -- but not in the air flight. That's not what 15:58 20 we're talking about. 21 Q. Okay. 22 And then my final question, Doctor, is prior 23 to this case have you done any -- have you testified in any 24 case about bullets shot at a moving vehicle? 15:58 25 A. Yes.</p>	<p style="text-align: right;">84</p> <p>15:59 1 reports for is quite a large number that happen doesn't 2 include the testimony. So the Arizona case I'm referring to 3 is a case that I did the work for and produced a report for 4 but I think it -- there is yet to be a deposition if there 15:59 5 is one. The other one had settled, they pled, essentially, 6 so there's no testimony. 7 Q. And so -- 8 A. But I do have -- have worked those cases. 9 Q. Okay. I'm sorry. Was it the Arizona case 16:00 10 with the train or was it the Arizona case with the moving 11 car? 12 A. Moving car, Arizona. 13 Q. And when you did the case with the moving 14 car, was that a case in -- with shots being fired by police 15:00 15 officers at a moving vehicle? 16 A. No. 17 MS. SULTON: Thank you, Doctor, for your 18 time. I appreciate your patience. 19 THE WITNESS: Thank you. 16:00 20 MR. PARKINS: Thank you. Nothing further. 21 THE WITNESS: Okay. 22 THE VIDEOGRAPHER: This concludes the 23 videotape deposition of Jon J. Norby, Ph.D. This is Case 1, 24 Volume I -- or Tape 2, Volume I. We are going off the 16:00 25 record. The time is 4:00 p.m.</p>

85

16:00	1	Stand by.
	2	(The videotape deposition of Jon J.
	3	Nordby, Ph.D., was concluded at
	4	4:00 p.m.)
16:00	5	---o---
	6	
	7	
	8	
	9	
	10	
	11	
	12	
	13	
	14	
	15	
	16	
	17	
	18	
	19	
	20	
	21	
	22	
	23	
	24	
	25	

Draft Copy